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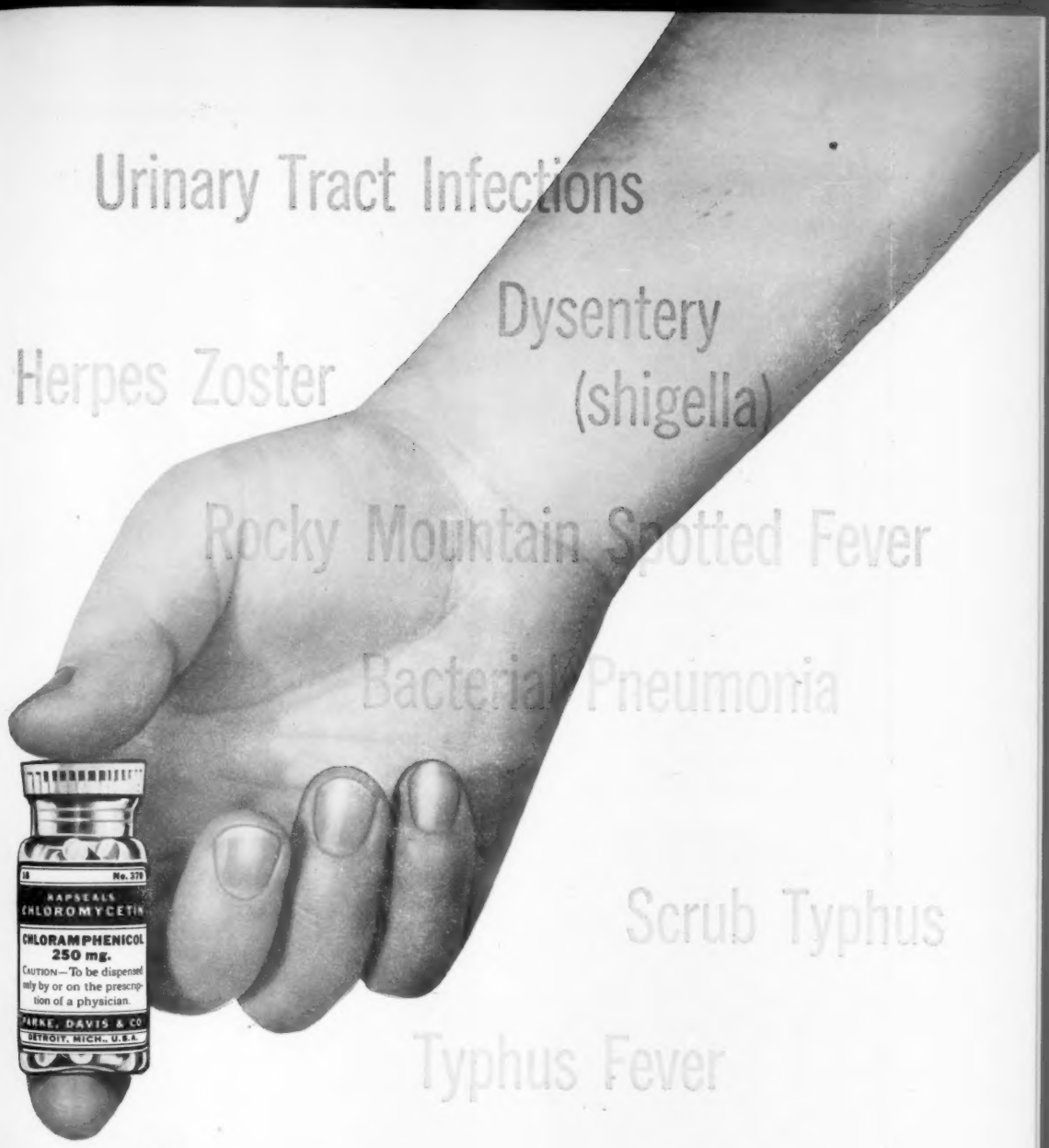

MEDICAMENTA VERA

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MARCH, 1951

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1. Dennison, A.D.: *Jour. Med. Soc. New Jersey*, 46:139, Mar., 1949.
2. Saslaw, M.S.: *Jour. Florida Med. Assn.*, 34:657, May, 1948.

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Manuscripts: Scientific Articles, Case Reports, etc., from any state for which this is the Official Journal should be submitted to the Scientific Editor for that state as named in the Editorial Board, above. Other material from any participating state should be submitted to the Associate Editor for that state as named above. Manuscripts from outside the Rocky Mountain area should be sent direct to the Journal office. Manuscripts must be typewritten, double or triple spaced, using only one side of each sheet. It is the policy of this Journal to omit bibliographies.

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THE COLORADO STATE MEDICAL SOCIETY

NEXT ANNUAL SESSION: SHIRLEY-SAVOY HOTEL, DENVER, SEPTEMBER 18, 19, 20, 21, 1951.

OFFICERS

Terms on Officers and Committees expire at the Annual Session in the year indicated. Where no year is indicated, the term is for one year only and expires at the 1951 Annual Session.

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Executive Office Staff. Mr. Harvey T. Sethman, Executive Secretary; Miss Helen Kearney, Assistant Executive Secretary; Mr. Evan A. Edwards, Public Relations Director and Field Secretary, 835 Republic Building, Denver 2, Colorado. Telephone AComa 0547.

General Counsel: Mr. J. Peter Nordlund, Attorney-at-Law, Denver.

STANDING COMMITTEES

Arrangements: Wm. M. Covode, Denver, Chairman; others to be appointed.

Credentials: George R. Buck, Denver, Chairman; James M. Lamme, Sr., Walsenburg; C. H. Graf, Boulder; C. G. Freed, Denver; F. J. McDonald, Leadville.

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MONTANA MEDICAL ASSOCIATION

NEXT ANNUAL SESSION: GREAT FALLS, SEPTEMBER 13, 14, 15, 16, 1951.

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Terms of officers and Committees expire at the Annual Session in the year indicated. Where no year is indicated, the term is for one year only and expires at 1951 Annual Session.

President: Clyde H. Frederickson, Missoula.
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Industrial Welfare Committee: R. B. Richardson, Chairman, Great Falls; Donald A. Atkins, Butte; Richard E. Brogan, Billings; Paul J. Seifert, Libby; Frank L. Unmack, Deer Lodge.

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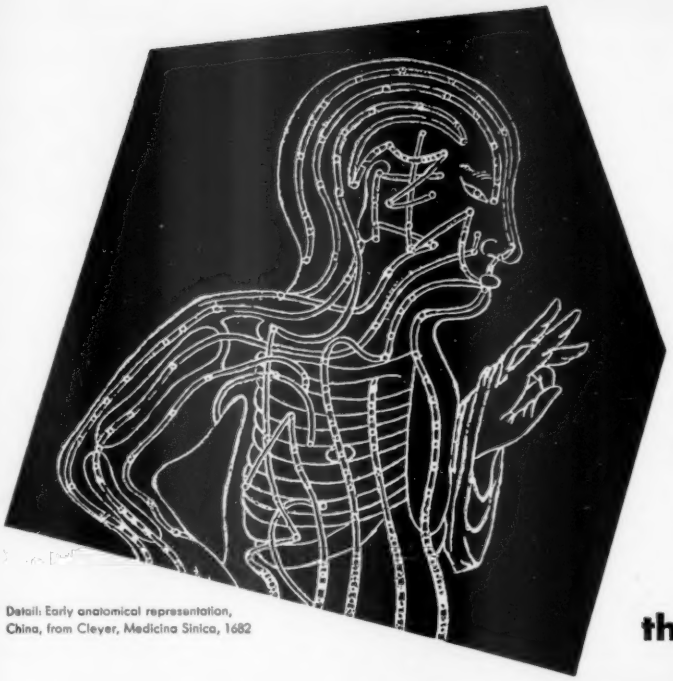
Mental Hygiene Committee: Winfield S. Wilder, Chairman, Great Falls; James J. Bulger, Great Falls; Roger W. Clapp, Butte; J. E. Kress, Missoula; Martin A. Ruona, Billings; Maurice A. Shillington, Glendive.



Detail: Early anatomical representation,
China, from Cleyer, Medicina Sinica, 1682

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NEXT ANNUAL SESSION: LA FONDA HOTEL, SANTA FE, MAY 3, 4, 5, 1951

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Alternate Delegate to A.M.A.: C. H. Gellenthien, Valmora, 1951.

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1. Krasno, L., and Rhoads, P. (1949), The Inhalation of Penicillin Dust; Its Proper Role in the Management of Respiratory Infections, Amer. Prac., 11:649, July.

THE UTAH STATE MEDICAL ASSOCIATION

NEXT ANNUAL SESSION, SALT LAKE CITY, SEPTEMBER 13, 14, 15, 1951.

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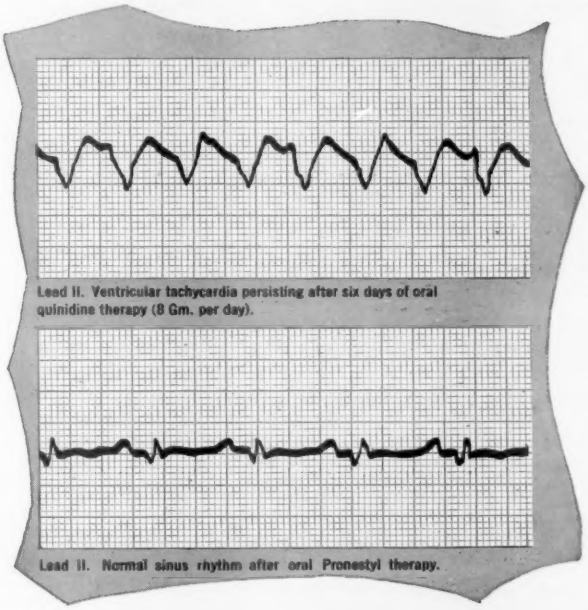

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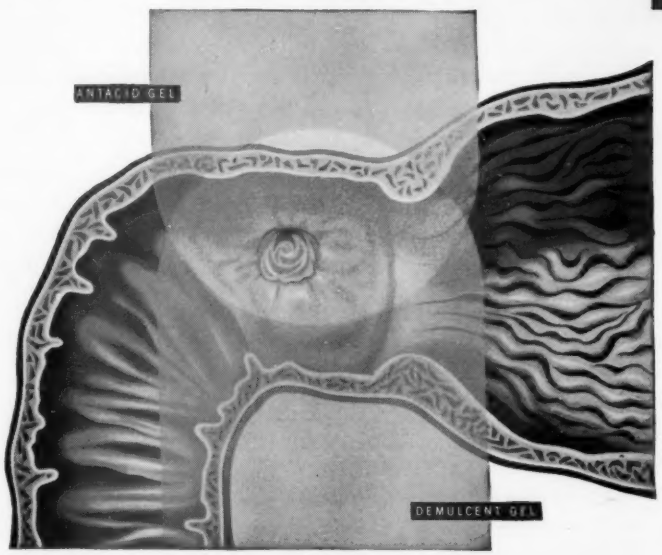

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(1) Ravdin, I. S., and Gimbel, N. S.: Protein Metabolism in Surgical Patients, J.A.M.A., 144:979 (Nov. 18) 1950.

(2) Vars, H. M., and Gurd, F. N.: Role of Dietary Protein in Experimental Liver Regeneration in Nitrogen Balance Study, Am. J. Physiol., 151:391 (Dec.) 1947.

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One spring day, just seventy-five years ago, Colonel Eli Lilly's young son hung a wicker basket on his arm and hurried out of his father's little shop to deliver the first order of Lilly pharmaceuticals. That basket cradled an infant production which has so grown that it now contributes to the health of the world. Such growth of an enterprise and of its benefits is possible only in a favorable economic climate. The opportunity for small businesses to succeed is essential to the continued prosperity and strength of America and to the ultimate welfare of all people.

Lilly

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Rocky Mountain Medical Journal

Colorado
Montana
New Mexico
Utah
Wyoming

MARCH
1951

Editorial

Editorial Immaturity

A GROUP of specialists recently put our necks out a bit farther, rolled our collars back, and beckoned the wavering axe of public opinion to fall. They decided, apparently by majority vote among themselves, to charge one dollar per phone call. We assume, of course, the charge would not be for every phone consultation; it would be in lieu of personal consultation regarding general care and feeding formulae. Discretion would determine whether the remote management of a problem would be safe and adequate, whether it warrants a cash consideration for value received, and that it would inflict no hardship upon the payer of the bill. Apparently they didn't make their intentions entirely clear.

Part of the story reached the public press, exploded and bounced right back in the laps of all of us. We agree that some of the specialists are more beset by the telephone than others. But pediatricians missed part of their training if they didn't figure that one out early enough to make a change if it didn't appeal to them. Other specialists have their headaches, too; space precludes enumeration of details, but we could go off on that tangent through all the pages of this Journal. The point is that the consumer resents paying for intangibles, and we can't put a price or ascribe a nuisance value upon the niceties that engender confidence and good will. It won't work. Trying to make it work will cost any group, and the entire profession, more than it will ever gain.

If any specialist or specialty group wants to put up this kind of self-defense, let it be an individual matter. But now is no time to spring it on a public already r'iled by rising taxes, living costs, and loss of confidence in its future. If the people are going to have impersonal assembly line medicine anyway, may as well have it "free" from the government! A disgruntled patron is ready to make a change, even it will ultimately backfire. We doubt that the action in question was meant for public airing, but it got it, and it will do nobody any good.

For example, an editorial in the Denver Post of February 7 is entitled "Oh, for the Family M.D." It derides specialization, as if it were not a part of progress. It misinterprets the error of a very small group, blames all doctors uniformly, and the Editor, apparently trying to be funny, succeeds only in being ludicrous. Writing an editorial when one is disturbed is the easiest task any editor can perform. But after that editor has matured in his profession he will sleep on the product of his ire. Next day he will consign it where the one in question belonged, down the drain, or will edit out the vituperation. In an instance like this last one, he would thereby retain the dignity he had previously established by championing many worthy causes, and he would have succored a profession which has increased his own personal life expectancy some thirty years.

We believe the Denver Post's editorial page was guilty of irresponsible and really juvenile journalism in its recent comments about medicine. An editor has a responsibility to his readers in any presentation which may affect the credulity of those who may make serious if not fatal mistakes, misguided by what they have thought must be truth because it was presumably the considered opinion of a great metropolitan newspaper.

We believe the high standards and the public service programs of the medical societies in these Rocky Mountain "Empire"

states provide all graphic evidence needed of the sincerity and the contributions of the profession to this region.

We believe the medical profession, locally and nationally, is making a most sincere effort to correct any inequalities which might deny any person the best medical care on earth. Under the pressure of the practice of modern medicine with its intricate patterns and the ever-growing factor of patient demand, some of us will inevitably enact some plan of self-defense against intolerably long hours and the physical and mental strain. A few of us will probably commit errors in method when we set up such defenses, because after all we are human, too. We trust that, if some of our actions appear questionable, editors will in the future adhere to their own professional exiom of ethics: "Get the whole story."

One views with regret the failure of any physician to discharge his entire responsibility under the Hippocratic Oath. Equally serious, we suggest is the sin of an immature editor who writeth about those matters of which he knoweth little.

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Mizpah!

TWO of our colleagues relinquish their editorial duties with this Journal in March: Dr. Earl Whedon of Wyoming and Dr. Herbert T. Caraway of Montana. Each departure deserves comment. These men are unique.

Earl Whedon promoted the idea of a "Wyoming Section" in the old "Colorado Medicine," sold the idea to the houses of delegates of the two state societies and became our first Wyoming Editor in 1926. He thus started the first interstate expansion of what had until then been a purely Colorado medical publication, urging it into a broader field that was soon to change its name to the Rocky Mountain Medical Journal and eventually was to encompass the medical journalism of five states. He continued as Wyoming Editor for eleven years, retired from that position for another ten years, then returned to the editorship in 1947.

Earl Whedon has earned his rest, yet we know of few physicians twenty years his junior who can match the mental and physical stamina of this tall figure who strode into our office the other day still looking for all the world like an artist's conception of the typical Wyoming stockman and handed us his final editorial to announce his retirement. Earl Whedon is one of the great characters of the medical profession of the old West and the new West, tieing the two together. Someone should write a book about him!

Herb Caraway is of a different generation. He leaves us editorially and gives up his private practice in Billings to assume what may be tougher jobs for the next few years. He goes on active duty as an Air Force Major this month, having quietly obtained his commission a couple of months ago.

Other doctors are doing the same all over the country, but we think it is a little different in the Caraway case, because he was under no pressure to do so other than the pressure of his own patriotism. His colleagues in Montana kept him out of a World War II uniform by assigning him the difficult and certainly thankless job of Procurement and Assignment Service Chairman for his state. In most states the P. & A. burden was placed on older men whose grey hair was sufficient evidence that they were beyond military age. Herb Caraway was undoubtedly embarrassed because some doctors of his own age group were in uniform where he preferred to be. Now, ten years later, he has insisted upon his privilege to serve in his country's armed forces, upon his privilege, if you please, to give up a lucrative practice, high office in his state medical association—all the things a successful doctor can attain—to sweat out a tour of military duty more suitable to a younger man.

To two great medical leaders, two great friends: Mizpah—God Be With You 'Til We Meet Again.

Please Show Me Your Tongue!

THERE are some very simple words in our English language that the average ultra-modern young doctor of today never uses. And, if he did, he might not have the slightest idea as to the useful information such a sentence as "Please show me your tongue" could convey toward diagnosis.

To us older doctors the tongue often spoke an eloquent diagnostic language, as in scarlet fever, typhoid fever, dietary indiscretions now known as vitamin deficiences, and especially in such conditions as cholecystitis and intestinal malfunctions.

And associated with that tongue picture was the new-almost-unknown master drug, calomel. No prescriptions for its use could be found in three of the largest drug stores in the writer's home town of Sheridan during the past two years! Yet that great master teacher, the late Dr. J. N. Hall of Denver, told medical students of his day that calomel was the greatest drug in the pharmacopeia—that if, in case of a shipwreck he were allowed only one drug to take from the sinking ship, he would take the biggest bottle of calomel he could grab. Young man, you had better read up on calomel!

Can it be that this drug is of no use to recent medical graduates? Did they ever take it in one-tenth grain doses every hour for ten hours and the next morning take a saline solution and enjoy the pleasure of a king by a good free evacuation, with a wonderful feeling of fitness for work?

At the nether end of the digestive tract there is located a little hole with delicate shades of brown (what makes it brown? Who knows?) that should be examined with the gloved finger and the protoscope, and this should be followed with a barium enema and the accompanying x-ray films, in order to determine the condition of the colon. The procedure is often overlooked today in some of the best clinics, and then cases of cancer are discovered six months later than they should be. Never overlook the barium enema in obscure bowel complaints.

Now one more shot! In back pain, especially causing pains extending into the muscles of the leg, do not confine your examination to the bony structure of the column, but inject around the cord an opaque solution which in good x-rays will show cartilage disc intrusion and pressure on the cord, with its referred pains. A disc or two pressing on the cord is the devil's own punishment—no one else could think up such a diabolical scheme to make a man suffer the tortures of the damned.

With the last words of this editorial, I retire as co-editor for Wyoming, and introduce my great friend and successor, Dr. Franklin D. Yoder of Cheyenne who, with honor both to the medical profession and the people of Wyoming, serves as Secretary and Director of the Wyoming State Board of Health. You will all admire and love him.

Adios, Amigos!

EARL WHEDON, M.D.

The Soul of Wit

MANY current publications, both medical and lay, have been full of comment regarding an article entitled "Letter to a Family Doctor" by Mr. Bernard De Voto, which appeared in the January, 1951, issue of Harper's Magazine and in the February issue of Medical Economics. Comment in the Journal A.M.A. and others has shown that physicians, as a group, felt especially insulted by the article. Many have answered at length. The briefest we have seen, and one of the best, was from a Denver doctor. Here it is:

Mr. Bernard De Whoosit,
49 East 33rd Street,
New York 16, N. Y.

Dear Sir:

Your circular "Letter to a Family Doctor" was read with interest. May I have copies of the circular letters to your grocer, butcher, tailor, shoemaker, haberdasher, liquor dealer, tobacconist, tax collector and baby sitter?

Thanking you,

Very truly yours,

WILLIAM H. HALLEY, M.D.

Public Good Will

OUR profession is gradually succeeding in its own "house cleaning" and we are seeing results in more public good will.

We have sponsored voluntary prepayment plans. We set up "grand jury" methods of self-discipline, and sensibly flexible community fee schedules. We are encouraging young doctors to enter general practice, which has lately been accorded the dignity it deserves. Twenty-four-hour referral centers are in operation. We have developed rapport with the press and radio, lost no dignity in doing so, and have thereby multiplied public medical knowledge tenfold.

But much remains to be done, because nothing human can ever be perfect. Too many medical societies still drag their feet while golden opportunities for public service go begging, and public complaints against doctors are still too frequent. Medical organizations as well as individual physicians may well memorize that basis of all ethics—the Golden Rule.

ROCKY MOUNTAIN Medical Conference

Come to Denver
May 9, 10, 11

THE circle has been completed, and starts again!

In other words, for the second time, the Rocky Mountain Medical Conference, our own five-state joint endeavor, will meet in Denver. The dates, fixed by the five-state Continuing Committee a year ago, are May 9, 10, and 11, 1951.

The Shirley-Savoy Hotel will be general headquarters for this, the sixth general meeting of the conference. As all older members of our five-state societies know (but some younger ones may not), the conference is designed to meet in alternate years, rotating its meeting place among our five Rocky Mountain states. It is purely a scientific meeting; the conference has no officers, no dues, no "politics"—it even forbids members of our own five states from giving papers on the general program, though they may offer scientific exhibits if desired. The conference is underwritten every two years by the then host state, but is intended to be self-supporting. Registration fees at its biennial sessions and the fees from commercial exhibitors provide the conference's income.

The program for the 1951 conference in May is already nearing completion. The guest speakers will include:

Frank P. Foster, Boston, Chief of Medical Service, Lahey Clinic.

Donald G. Johnson, New York, Professor of Obstetrics and Gynecology, Cornell University.

J. Vernon Luck, Los Angeles, Orthopedic Surgeon.

Louis A. Buie, Rochester, Chief of Proctology, Mayo Clinic.

George M. Curtis, Columbia, Professor of Surgery, Ohio State University.

Martin T. Van Studdiford, New Orleans, Professor of Dermatology, Tulane University.

In addition to these outstanding guest speakers, the program will include daily programs of full-color television, televized direct from the Denver General Hospital surgical amphitheater to the meeting hall in the Shirley-Savoy Hotel. This will be only the second time in history that television of any kind has been demonstrated in Colorado, the first being when a similar television program was part of the annual session of the Colorado State Medical Society in 1949. As in the previous instance, the color television program is sponsored by the Smith Kline and French Laboratories, which will ship a complete transmitting station and a complete receiving station and group of individual color receivers to Denver for this event.

A detailed program for the May 9-11 conference will appear in our next issue.

Original Articles

MALIGNANT TUMORS OF THE EYEBALL*

C. S. O'BRIEN, M.D.
IOWA CITY, IOWA

Primary malignant tumors of the human eye are not common, but in a consultation practice or in a clinic are seen each year. There are only three types which occur with any degree of regularity, two of which are intra-ocular and the other epibulbar. The first of these is retinoblastoma which occurs in infants and young children and has its origin in the retina; the second type known as malignant melanoma arises from the uveal tract and is found most commonly in patients over 40 years of age; and the third is epithelioma located at the limbus or junction of the conjunctive and cornea. There is one other malignant tumor occurring within the eyeball, namely carcinoma, but this is always secondary to a cancer in some other portion of the body.

Retinoblastoma

Retinoblastoma, sometimes known as glioma, is not a common tumor. It is almost always found in children under the age of six years and is bilateral in approximately 20 per cent of cases.

In the early stages there may be no sign which can be recognized by the parents but later a yellow reflex may be seen in the pupillary area, a condition known as "amaurotic cat's eye." An examination at this time reveals one or more small nodular white or yellow masses in the retina and perhaps even some nodules floating in the vitreous. A roentgenogram at this time may show calcification in the eyeball. Later the child may complain of pain and the eye may become red as the result of increased pressure within the eyeball (secondary glaucoma) or in rare cases the necrotic tumor may give rise to an iridocyclitis.

In neglected cases the tumor may extend through the coats of the eyeball along the optic nerve to the brain or less commonly it may extend into the orbit and produce a fungating mass. The tumor often grows along the optic nerve to the brain but less commonly may metastasize and if so it usually is found in the facial or cranial bones, lungs, et cetera.

There are a number of diseases which must be differentiated, notably external exudative retinitis (Coats' disease), vitreous abscess, persistent fibro-vascular sheath of the lens, metastatic panophthalmitis and serous detachment of the retina. There are certain other rare diseases with which retinoblastoma may be confused.

Pathologically the tumor arises from the inner or outer nuclear layer of the retina and the cells resemble the embryonal retina at about three months. One may see small rosettes consisting of small, elongated cells grouped around a thin central membrane. Necrosis and calcification are common in these tumors.

The prognosis for life is usually good if the eyeball is removed before the tumor has grown backward along the optic nerve. One must always examine very carefully the opposite eye since the condition is so frequently bilateral.

If the tumor is present in only one eye, enucleation is indicated. One should take a long section of optic nerve and immediately examine it under a microscope to determine whether or not the nerve is involved. Simple enucleation is sufficient if the nerve is normal, but if it is involved probably an intracranial approach with removal of the entire optic nerve is best. If a tumor is present in the second eye an effort is made to save some vision and irradiation with roentgen rays is indicated.

*Presented before the Third Annual Rocky Mountain Cancer Conference, Denver, July, 1949.

Malignant Melanoma

Intra-ocular malignant melanoma is one of the most dangerous of all tumors since it so often goes unrecognized and inasmuch as it metastasizes early and very frequently results in death to the patient. It is not a common tumor, occurring in approximately one in 10,000 cases. Malignant melanoma arises from the uveal tract, occurring in the choroid in about 85 per cent of the cases; less commonly it is found in the ciliary body and in rare instances in the iris.

The tumor usually is encountered in patients from 40 to 60 years of age but it is found occasionally in those from 20 to 40 years of age. It is almost invariably unilateral. About 50 per cent of the cases are not diagnosed clinically even in the later stages.

The earliest stage of the disease is seen rarely since ordinarily there are no symptoms and the patient does not consult a doctor. If the tumor is located in the region of the macula or optic nerve, the patient may complain of flashes of light, some distortion of objects, poor visual acuity or perhaps of the loss of a portion of the field of vision. If an examination is made at this time usually one sees an elevated, slightly brownish mass underlying a partially detached retina. Transillumination of the eyeball reveals a solid mass. Later increased intra-ocular pressure may supervene and the eye may become congested, painful, and lose vision rapidly.

This tumor often metastasizes to the liver, lungs, bones, meninges, et cetera. Or it may extend into the orbit. The reason for the early metastasis lies in the fact that oftentimes the blood spaces within the tumor are not lined with endothelial cells but only with tumor cells and thus the latter easily reach the blood stream and are carried to other parts of the body.

The diagnosis may be made more difficult because of a cataract which prevents visualization of the fundus. It may be stated here that any eye in a patient 30 or more years of age with unilateral glaucoma or one having unilateral glaucoma and cataract must be suspected of having intra-ocular malignant melanoma.

In differential diagnosis one must consider a benign melanoma, serous detachment of the retina, primary glaucoma and a few rare diseases. With malignant melanoma of the ciliary body or iris a deeply pigmented, bulging mass may be seen situated directly behind and at the side of the lens or some place in the iris.

The origin of these tumors is believed to be from the nerve sheath of the sensory nerves or it may have its origin from the pigmented cells of the uvea. Ordinarily the tumor consists of spindle cells or an epithelioid type of cell and usually it contains more or less melanin. The tumor is quite vascular as a rule, and ordinarily there is little stroma.

The prognosis must be guarded because of the tendency to early metastasis. Patients have been known to die from five to ten years after enucleation of the eye.

The treatment is, of course, immediate enucleation of the globe. If the tumor has extended through the coats of the eyeball, the contents of the entire orbit must be exenterated. Irradiation has no effect whatsoever on this tumor.

Malignant melanoma of the conjuctiva may appear as diffusely pigmented areas or as pigmented nodules. Microscopic examination is necessary for diagnosis since nevi and benign melanosis have a similar appearance.

Epithelioma

Occasionally in older people one sees at the limbus a pink, translucent, vascularized mass into which large vessels extend. This is an epithelioma and is only locally malignant. Excision and irradiation usually control this neoplasm.

Carcinoma

Carcinoma occurring within the eyeball is always metastatic and is usually secondary to cancer of the breast, prostate or less commonly from other areas. This condition is rare; it is usually bilateral and the tumor grows rapidly. Usually a gradual

deterioration of vision is the only complaint. Ophthalmoscopic examination reveals a rather diffuse, flat, yellowish or grayish mass with an edema or even a flat detachment of the retina. The local treatment of this condition is not important in that it is usually a part of the picture of general metastasis.

THE PHYSICIAN'S TASK IN THE ATOMIC EXPLOSION

HEINZ RICHARD LANDMAN, M. D.
SANTA FE, NEW MEXICO

In these days of mounting international tension the likelihood that we may be subjected to atomic bombardment is not remote. It is with this in mind that the physician ought to know what he can and what he must do. There are two areas in which he can be of benefit to the public. One to enlighten an already overly frightened population as to the types of injuries that can be expected from an atomic explosion and instruct them as to possible protective measures, and the other to familiarize himself with the action of the atomic bomb, the casualties and their treatment.

It is unfortunate that in the past, when we were believed to be the only guardians of the secret, newspapers and magazine articles played up the intangibles of this new weapon, emphasizing mainly the radiation effects of the atom bomb and barely, if ever, mentioning the fact that in Hiroshima and Nagasaki radiation accounted only for 15 per cent of all casualties. After all, the atomic bomb was primarily constructed for its enormous explosive power and the radiation effects are more or less a by-product.

The effects of an atomic explosion, as far as the physician is concerned, can be divided into three categories, namely:

1. Thermal effects.
2. Blast effects.
3. Radiation effects.

The explosion itself can occur above the ground, on the ground, or under water. From a military point of view the explosions above the ground or, if a large body of water is adjacent to the objective, under water are the most effective. Explosions on the ground have a smaller radius to their explosive force and are, therefore, unlikely to be used.

Thermal Effects

We learned from the explosions in Japan which were above ground explosions that at the instance of detonation enormous temperatures, almost approaching those of the sun, are generated. A "ball of fire" is produced, extending rapidly from the center of the bomb to about 300 feet. This "ball of fire," then, rises in its own thermal updraft, gradually losing its brilliance and heat, in the familiar mushroom cloud and the surrounding atmosphere. Practically all substance within the area of this "ball of fire" is burned completely. Secondary fires which start almost immediately in the area beyond the "ball of fire" add their effects to the already tremendous thermal updraft, thus carrying this "ball of fire" and the atomic cloud to an altitude of 50-60,000 feet within a matter of minutes. This thermal effect is rather instantaneous and results in flash-burn casualties up to about two and one-half miles. Naturally, the nearer individuals are to ground-zero the more severe the burn and those at ground-zero will become fatalities. Severe third degree burns will probably result up to approximately one mile. About 20-30 per cent of all fatal casualties in Japan were attributed to flash burns. Flash burns, however, are prevented by a minimum amount of shielding. The burns will occur only on those parts of the body which are exposed to the source of the flash, so that unilateral burn is the rule. Light clothing with its reflecting power gives much better protection than the absorptive dark clothing.

Permanent injury to the eyes due to the

flash was not frequently observed in Japan, but temporary blindness from looking at the flash will occur out to a distance of ten miles. There is reason to believe that permanent retinal damage will be produced from closer direct exposure. The flash of the atomic explosion is visible at over 200 miles.

Blast Effects

It has been calculated that the bombs used in Japan had an equivalent explosive power of 20,000 tons of TNT. The direct effects of blast from an air burst bomb on persons, however, is less than might be expected. Serious internal injury is rare as will be seen later on. The indirect injuries due to flying material and debris will account for most of the casualties during this phase of the explosion. A phenomenon different from the usual high explosive force of ordinary explosives is observed in an atomic explosion. The usual pressure effect of a high explosive extends from the center outward. In an atomic explosion, however, due to the huge thermal updraft of the ball of fire, there will be, after a few seconds' delay, a terrific backrush of air opposite to the direction of the original blast. This backdraft will not only fan secondary fires tremendously but also hurdle a great quantity of debris, etc., toward the point of detonation. An individual fortunate enough to escape injury from the original blast because of shielding may well become a casualty during the second phase.

The extent of material damage is estimated as follows: One mile radius from ground-zero, ordinary houses would be demolished or require demolition. One and one-half mile, houses may become uninhabitable and require major repairs. Two to two and one-half miles, houses may become temporarily uninhabitable, requiring minor repairs.

One must remember that from an air burst the blast waves strike from above downwards and hit roofs first. Near the center of the damaged area buildings will collapse or, with especially strong buildings, roofs will be crushed in though the walls may remain standing. Further on, where the blast wave becomes more horizontal, buildings are pushed over or distorted.

Radiation Effects

With the detonation of the atom bomb there will be emissions of alpha and beta particles, of gamma rays and neutrons. Space here does not permit the discussion of the basic principles of nuclear energy. This information can be easily obtained elsewhere.[1] The initial emission of these particles and rays is termed the "direct radiation." Such is of short duration, lasting approximately ninety seconds. Alpha and beta particles have a very short range and it is, therefore, unlikely to find casualties from the direct alpha and beta radiation as any individual close enough to their effective range would have become a fatality from the thermal effects.

The greatest number of radiation casualties are caused by delayed or residual radiation. These are the emissions from the fission products rising in the atomic cloud. Here the gamma rays are the most damaging because of their larger range. They can produce severe biological damage. An additional radiation hazard is the neutron which is the cause as well as a result of the atomic explosion. Neutrons appear only during the actual explosion of the bomb and for an almost imperceptible period thereafter. They have a range of approximately 1,000 yards. It is unlikely that direct neutron radiation would produce casualties, as a living being can be expected to become a casualty from the blast or thermal effect within this 1,000-yard radius. However, neutrons have great penetrating power and could do damage to persons who were well sheltered against the thermal or blast effects. Ordinary reinforced concrete is no obstacle for the neutron but neutronproof shelters can be built.

With this initial discussion of the threefold effects of the atomic bomb let us consider now our experiences in Hiroshima and Nagasaki, and see what we could do protectively if such a catastrophe should occur here. The direct blast effects at Hiro-

shima were rather insignificant and resulted in about one hundred ruptured eardrums. Cases of trauma to the lung or ruptured viscera are not on record. Compare this with the tremendous amount of casualties due to the indirect effect. Timbers, masonry, glass and debris hurled by the rapidly created winds caused thousands of injured. General Cooney who reviewed the hospital records of 625 cases in one hospital found only one fractured femur. Moreover, he remarked about the absence of such serious injuries as fractured spine and skulls. He feels that due to the apathy of the general population no systematic evacuation of these seriously injured was undertaken and that they, therefore, became the victims of the raging fires.[2]

This is one tremendous lesson we here will have to learn: It is safe, under certain precautions which will be discussed later on, to enter a bombed area after about 90 seconds (the phase of the direct radiation). Therefore, all efforts must be made to extinguish the secondary fires and to evacuate the wounded. Here again, if we are to enlighten the public, we must minimize the radiation effects and remember that 85 per cent of the casualties are due to blast and burn. We cannot afford to have people unduly frightened so that they will refuse to cooperate in rescue attempts. For, if such should happen, many wounded would be neglected and burned to death.

The burn cases in Japan could be divided into two categories—flash burns and flame burns. The latter caused by the secondary fires, the former by the flash of heat released at the instant of the explosion. As mentioned above, clothing was protective against the flash burns; however, within a 1,000-yard radius, it offered little or no protection. Actually, within this radius, there were many whose clothing caught fire. Some effects from ultra-violet radiation could also be noticed. Some people, about 2,200 yards from the ground-zero, received sufficient ultra-violet radiation to cause a walnut stain of the exposed skin. Others, about 2,000 yards away, received such large quantities that the pigmented layer in the skin was almost completely washed out.

Of great concern in both Hiroshima and Nagasaki were the secondary fires which caused thousands of casualties. Here again we will have to learn how to plan for an efficient early evacuation of these burn cases. Let us only remember some of the larger outbreaks of fire, such as the Cocoanut Grove in Boston, with "only" a few hundred casualties and recall the manner in which all medical facilities were overtaxed. How will we treat a few hundred times that many casualties resulting from an atomic explosion? Here again it is the physician's task to help his community in planning for its defense and for the possible treatment of the expected casualties. It is not within the scope of this paper to discuss the treatment of burns. Suffice it to mention, however, that in Japan thousands of burn cases became secondarily infected and healed with scarring, keloid, and contractural deformities.

We mentioned earlier that the radiation effects in Japan accounted for only 15 per cent of the total casualties. It is this small percentage that should be stressed to the public, for most pepole when asked to guess about the number of radiation to blast or burn injuries will reverse that ratio. Most of these radiation injuries were produced by delayed gamma rays. How is radiation injury sustained? All radioactive emissions, be it alpha or beta particles, gamma rays or neutrons, produce their injury by ionization. Ionization can be understood if one considers one of these radiations colliding with an atom, thereby causing the atom to lose an electron from its orbit. When the atoms in the living cell undergo a certain amount of ionization the cell no longer is able to carry out its function and it dies. It is thought that ionization in living tissue will cause the formation of hydrogen peroxide which is a strong enzyme inhibitor. Once the living organism is deprived of its enzyme activity it can no longer exist.

The physician must, furthermore, be aware of the differentiation between external and internal radiation if he is to evaluate radiation hazards properly. "External radiation" includes all nuclear par-

ticles and radiations emitted from a source outside the body. "Internal radiation" refers to a source of radiation within the body. The alpha particle is comparatively large and its range no more than a few centimeters in air and a few millimeters in tissue. Therefore, it presents no problem from the standpoint of external radiation as it is easily stopped by the horny layer of the skin. The beta particle has a range of a few meters in air and, perhaps, a half centimeter in tissue. This enables it to cause severe damage to the skin if present in sufficient quantities. It does not penetrate, however, into the deeper structures of the body such as the bone marrow or the lymph glands. The gamma ray and the neutron, however, have the ability to penetrate to the deepest structures of the body, causing ionizing within the tissues which, if sufficient, will cause death. Therefore, the latter are the most feared from the standpoint of external radiation.

Radioactive substances, as far as internal radiation is concerned, may gain access to the body through one of the following ways: (a) ingestion, (b) inhalation or (c) through a break in the skin. Here the alpha particles are the most feared, for they have the highest ionizing potential of all radioactive emissions. Once they have gained access to the body they will be in close contact with the delicate tissues and cause severe damage. They are the ones which will produce malignant tumors years later as was the case in the early radium dial workers who touched their tongues with the paint brushes they were using in their work. The radioactive material was absorbed from the gastrointestinal tract and carried by the bloodstream to the bones, producing osteogenic sarcomata from five to fifteen years later. The beta particle can also prove to be a hazard from the internal radiation point of view. Gamma rays and neutrons, because of their deep penetration, do not constitute a hazard as far as internal radiation is concerned.

What constitutes the lethal dosage of acute radiation to the total body surface? It has been calculated from animal experiments that about 600 roentgens will be the lethal dose for the average healthy man. This is an assumptive figure and by no means proved. Many factors will determine the actual lethal dose for a given individual, such as height and weight, the state of nutrition and health. MLD is generally considered at 400 r. It is difficult, indeed, to measure exactly the roentgen dosage from the direct radiation at the time of a bomb detonation. However, it goes without saying that the closer an individual will be to ground-zero the greater the acute radiation exposure will be. And the greater the exposure the earlier the appearance of the symptoms of acute radiation sickness. If an individual has received a full lethal dose (600 r) he will usually show nausea and vomiting after one to two hours. Then, for a day or two, there may be no definite symptoms at all. This period is followed by the appearance of diarrhea, more vomiting, oro-pharyngeal lesions (such as seen in agranulocytic angina), fever, rapid emaciation and death within two weeks. If exposed to a median lethal dose (400 r) nausea and vomiting after one to two hours will also develop. However, the latent period will extend to approximately one week and, toward the end of the second week, extending up to the fourth week or a few days more, the following symptoms will appear: epilation, loss of appetite and general malaise, fever, severe oro-pharyngeal lesions, pallor, petechiae, diarrhea and nosebleeds, rapid emaciation and death for about 50 per cent of people thus afflicted. Those exposed to only a moderate dose of radiation (100-300 r) will have no initial symptoms and a latent period of about two and one-half weeks, after which epilation, malaise, sore throat, petechiae, diarrhea and moderate emaciation will appear over a period of about two weeks. Recovery here is likely unless complicated by poor previous health. The most characteristic changes, from the laboratory standpoint, of acute radiation sickness are the ones which take place in the blood. Soon after exposure there is a drop in the number of lymphocytes, followed by a decrease in the total white cell count. In moderate cases this decrease may

level off at about 1,500-3,000 WBC per cmm. In severe cases in Japan the bloodcount dropped to 300 or even less just before death. After about one week the lymphocytes will have reached their low point and their number will increase in such cases that will recover. During this period, however, the red blood cells may show a decline which is especially noticeable in the third week in those cases where the radiation exposure was high. Because of the almost selective affinity of ionizing radiation to the bone marrow and lymphoid tissure, frequent observation of the blood picture will give fairly accurate clues as to the prognosis. The effect of the radiation upon the lymphoid tissue will also cause a cessation of immunological responses because immune substances are no longer formed. With the appearance of bone marrow depression there will also be ulcerations of the gastrointestinal tract and the permeability of the capillaries will be increased. Water and electrolyte metabolism will be disturbed. It becomes apparent that ionizing radiation causes widespread damage by its damage to the cellular metabolism. The question has often been raised whether or not radiation will affect germ cells so that they transmit mutagenic properties. While it is true that Muller could produce mutations in the fruit fly with ionizing radiation, the human germ cell apparently will die rather than be in a state of transmitting such properties. The nerve tissue cell is the most resistant human cell to radiation.

How can we treat acute radiation sickness? Unfortunately we have no one remedy that would cure such illness. Because of the early onset of vomiting and diarrhea the maintenance of the proper water and mineral balance is of greatest concern. Dehydration ought not be allowed to develop as it entails also a disturbance in the acid base balance which is most undesirable. Inasmuch as these patients undergo tissue destruction the maintenance of an adequate diet to provide materials for repair is of importance. This may prove to be a great problem for patient and physician alike as the nausea and vomiting will cause an aversion to food. One must probably rely a great deal on intravenous feeding. Vitamin intake should be high to enhance all enzyme activity as much as possible. Ionizing radiation, moreover, seems to liberate a heparin-like substance in the body which causes the petechiae and bleeding tendency. Toluidine blue or protamine sulphate may control these hemorrhagic tendencies. Whole blood transfusions seem to have little effect on the hemorrhages. However, with a progressively falling blood count, blood transfusions will be required to improve oxygen transport and to supply antibodies for the body's bacterial defenses. The bone marrow will regenerate if given sufficient time unless the radiation exposure was overwhelming. The rational of all recommended therapy, therefore, is to provide this time optimally for this regeneration to take place. The use of antibiotics is recommended because of the dangers of secondary infections. The newer drugs such as Cortisone or ACTH have not as yet been sufficiently studied in cases of acute radiation sickness to allow any definite conclusion. There is no definite treatment for the apilation which occurs often during the second or third week after exposure. However, such patients should be reassured that the hair will return with a few months' time as otherwise the psychological trauma will be great.

From the foregoing discussion it becomes apparent that the casualties produced by an atomic explosion, be they burn, blast or radiation injuries, will require an enormous amount of professional personnel, medical and surgical supplies, trained rescue and first aid workers. Here again, the physician's knowledge will be of great help in instructing the selected personnel in his community, in helping to work out an efficient plan for relief should a catastorphe strike. As mentioned above the initial direct radiation is only of a duration of ninety seconds. After this time it is relatively safe to enter a bombed area in order to fight the fires and extricate the injured. The danger from residual radiation remains, however, but we do have methods of detecting such and guarding ourselves against overexposure. We know of the Geiger-

Muller counter or the Ionization Chamber, both instruments designed to measure the ionization produced by the radioactive emissions. Monitors assigned to the different rescue crews will carry such instruments and are instructed to interpret the findings. They are charged with the safety of their crews. One-tenth of a roentgen unit has been calculated as a safe exposure per day. It will not result in any latent radiation injury. Other instruments, such as individual pocket dosimeters or the film badge, have been designed for individual protection. The pocket dosimeters are so constructed that one can read immediately the amount of radiation exposure. The film badges which look like dental x-ray films and are worn with a clip on the outside of the individual's garment will have to be developed and their density must be determined with an instrument known as the densitometer. From the density of the emulsion that was struck by radiation one can then calculate the amount of exposure.

Crews going into a radioactive area must also be protected by proper clothing, i.e., well fitting garments. They must include gloves and, if there is danger from spray radiation (as in an underwater explosion) gas masks. These precautions do not protect from gamma rays, but they will shield off alpha and beta particles, and we wish to be protected against the latter especially. The gas mask must be worn to exclude the internal radiation hazard. Anyone returning from a contaminated area, be it rescue worker or victim, must go through a decontamination process at one of the decontamination stations that are to be erected at the periphery of the affected area. Everyone will have to submit to a "going over" with a radiation detector. This will detect any fission products that may have lodged on the clothing or on the skin of the individual. Not only the persons returning from the bombed out area will have to be monitored; every object removed will have to be inspected for residual radiation. These emissions are not induced radioactivity; they are particles of fision products that fell from the atomic cloud and attached themselves to the surfaces of subjects and objects alike. Persons returning must shed all their clothes and shower with water and soap. Often several such showers will be necessary to rid oneself from the last vestiges of radioactivity. Lightly contaminated clothing can be laundered under safety precautions; more heavily contaminated clothing should be buried and the spot marked. The radioactive decay will render such garments harmless after a while. Gamma rays have no harmful effects upon food. The deposition of fission products upon unprotected foods, however, constitutes a great danger, which can be obviated by storing of food in airtight containers. Foods which were in close range of neutrons, however, are likely to show induced radiation and would have to be disposed of irrespective of whether they were in airtight containers or not. Contamination of an airburst, fortunately, does not present an insurmountable problem because most of the fission products are carried upwards to the sttratosphere where the radioactive decay will render them harmless well removed from any habitation.

The problem of decontamination is more complex, however, in the case of an underwater explosion. Such a detonation would be used against harbor installations and cities close to a large body of water. The blast and thermal effects of an underwater explosion would be negligible. However, the tidal waves and spray which would overrun the coastal areas would be tremendous. This fine spray will carry fission products and the residual radiation will be the greatest problem. But even in such areas proper decontamination can be worked and carried out.

We recognize from the above discussion that the physician's task is not only one of treating casualties. He has the confidence of the public and he is well equipped to allay exaggerated fears, to work closely with civilian defense officials in the proper planning and execution of workable defense plans. To describe some of the latter is not within the scope of this paper. There are many blueprints in the hands of the

proper municipal, county, and state officials. It remains a tragic fact that casualties will occur in an atomic explosion but proper information, proper planning, and proper execution of such plans could bring the number of casualties here to only a fraction of what they were in Japan.

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THE LAWS OF HUMAN STERILIZATION IN COLORADO, UTAH, AND MONTANA*

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The first eugenical sterilization law was enacted by the Indiana Legislature in 1929, and since that time twenty-nine states have adopted similar legislation. Sterilization laws generally have various purposes in view. These purposes include penal, therapeutic, and eugenic. The legislation may be termed compulsory or voluntary. By compulsory sterilization is meant non-consent operation.

The Utah law is a compulsory measure and applies to the insane, idiots, imbeciles, feeble-minded, epileptics, and degenerate sexual criminals that are confined in state institutions. The Montana law provides for both compulsory and voluntary sterilization and pertains to idiots, feeble-minded, insane, and epileptic persons within custodial institutions. Colorado has no sterilization law.

Constitutional Limitations and Compulsory Sterilization

In the early history of sterilization, various statutes were declared unconstitutional on the grounds that they provided for a cruel and unusual punishment, denied equal protection of the laws because applicable only to those confined in certain institutions, and denied due process of law because of the procedural aspects and because they were beyond the police power of the state.

Where the statutes are not eugenic in their purpose, they have been declared unconstitutional on the theory that such laws are in conflict with state constitutional provisions forbidding cruel and unusual punishments. Only one decision has held that sterilization by means of vasectomy is not a cruel punishment so as to render it unconstitutional; however, that decision arose in Washington, a state whose constitution forbade only cruel punishment. The Constitutions of Colorado, Montana, and Utah forbid cruel and unusual punishment. Legislatures have avoided having laws declared unconstitutional as providing for cruel and unusual punishment by expressly stating that the law is purely eugenical and not a penal measure. The Utah law provides for the sterilization of habitual degenerate sexual criminals and carefully provides that sterilization is not to be performed unless such person by the laws of heredity is the probable potential parent of socially inadequate offspring likewise afflicted. The Montana law expressly provides that the purpose is eugenic and not punitive. It thus appears that the Utah and Montana laws will not be declared unconstitutional for violating the cruel and unusual punishment provisions of their constitutions.

The denial of due process has been avoided by making certain that notice be served upon the inmate, guardian, and sometimes the next of kin. The statutes provide for a hearing by a board of the custodial institutions wherein the inmate is confined or by the state board of eugenics in Montana. Due process is also guaranteed by providing for an appeal to the district court of the district in which the custodial institution of the inmate is located.

In the case of Buck v Bell, a Virginia law providing for compulsory sterilization of feeble-minded persons in custodial institu-

*Limited space precludes inclusion of an extensive list of reference.

tions was sustained as not involving a denial of equal protection of the laws or due process of the law. It was argued in that case that there was a denial of equal protection since the law would only be applied to a small number of persons in custodial institutions and not to the multitude outside. Mr. Justice Holmes answered that argument by saying:

> The law does all that is needed, when it does all that it can, indicates a policy, applies it to all within the lines, and seeks to bring within these lines all similarly situated so far and so fast as its means allow. Of course, so far as the operations enable those who otherwise must be kept confined to be returned to the world, and thus opened asylum to others, the equality aimed at will be more nearly reached.

Mr. Justice Holmes explained the exercise of the police power in holding:

> We have seen more than once that the public welfare may call upon the best citizens for their lives. It would be strange if it could not call upon those who already sap the strength of the state for these lesser sacrifices . . . It is better for all the world if, instead of waiting to execute degenerate offspring for crime, or to let them starve for their imbecility, society can prevent those who are manifestly unfit from continuing their kind. . . . Three generations of imbeciles are enough.

This decision thus determined that compulsory sterilization laws are constitutional as applied to the feeble-minded in custodial institutions.

Criminal Responsibility for Consent Sterilization

In respect to criminal responsibility, the question is to determine whether modern sterilization operations of vasectomy and salpingectomy are to be considered as mayhem. If so, consent of the patient would afford no defense to a criminal prosecution. Such an operation certainly is not a mayhem as known at common law, since it does not render one less able to "fight for the King," "defend himself," or "to earn his own living." But most states have incorporated into their codes a broader definition of the crime of mayhem than was known at the common law. Montana and Utah are identical in providing:

> Every person who unlawfully and maliciously deprives a human being of a member of his body, or disables, disfigures, or renders it useless, or cuts or disables the tongue, or puts out an eye, or slits the nose, ear, or lip, is guilty of mayhem.

The Colorado Code is as follows:

> Mayhem consists in unlawfully depriving a human being of a member of his or her body, or disfiguring or rendering it useless.

It seems that the operations of vasectomy and salpingectomy would render useless the procreative organs, in the sense that they would be no longer useful for procreation. For the gratification of sex desires, for satisfying the law as to potency, for committing the crime of rape, they would still be useful. Consequently, whether or not the operation renders a member of the body useless may vary according to the point of view of the patient or the judge. There are no decisions on this point.

Under the Montana and Utah Codes, it would appear that where consent is given no criminal responsibility would exist for mayhem because such consent would remove the necessary element of malice on the part of the physician. This would not necessarily follow, however, for malice on the part of the operator may exist concurrently with consent on the part of the patient. Under the Colorado Code, malice is not necessary and it might, therefore, be possible to find a physician criminally responsible for mayhem in a non-therapeutic operation where consent is given, if it is determined that procreative organs are rendered useless.

The Utah Code expressly provides that the unlawful destruction of the power to procreate is a felony:

> Except as authorized by this title, every person who performs, encourages, assists in or otherwise promotes the performance of any of the operations described in this title for the purpose of destroying the power to procreate the human species, unless there shall be a medical necessity, is guilty of a felony.

The term medical necessity as used in the statute is rather vague. One authority states that presence of disease or disability reasonably requiring the operation is

enough to purge the operation of illegality. The Minnesota case of Christensen v Thornby, which did not involve a statutory interpretation of medical necessity, held that it was not against public policy for a surgeon to sterilize the husband in order to protect the health of the wife against risk of a pregnancy which her physical condition made undesirable. It appears that a physician has a rather broad discretion in determining the medical justification for sterilization; however, such a provision as found in the Utah Code would seem to prevent sterilization for purely non-therapeutic birth-control purposes.

Civil Liability for Consent Sterilization

In Montana, which has no specific penal provision prohibiting a sterlization by modern methods, the general rule of tort law would seem to apply and the consent of the party to submit to the operation should prevent civil liability on the part of the operating physician, providing the operation is performed without negligence.

Where there is a penal provision, such as found in the Utah Code, the physician may be civilly liable. The theory is that since the state has an interest in the sterilization of individuals, neither party has the right to make any agreement or suffer injuries to his person, and any such agreement is void.

In Colorado, a physician may or may not be civilly liable for a non-therapeutic sterilization depending on the interpretation of their mayhem statute. If the organs are deemed to be rendered useless as intended by the statutory prohibition, then the physician may be civilly liable because of the interest of the state. On the other hand, if modern sterilization is not considered as mayhem under their statute, then it appears that a physician would not be civilly liable for such an operation.

Liability to Non-Consenting Spouse

Another possibility of a physician being civilly liable arises when a cause of action is denied the spouse upon whom the operation is performed because of his or her consent. In such a case, will the operating physician be liable to the spouse who has not consented to the sterilization? It seems that when a surgeon intentionally destroys the procreative power of one whom he knows to be married, he must know that he destroys by that same act the procreative interests of the spouse; he is bound to know that two interests, rather than a simple primary one, are injured by his act. In Flandermeyer v Cooper it was held that one who sells habit-forming drugs to one spouse cannot set up the voluntary character of the transaction to bar tort liability to the other spouse.

Liability for Non-Consent Sterilization

A physician may be liable in assault and battery if he fails to obtain proper consent for a sterilization operation. Absence of negligence is immaterial and nominal damages will be inferred even in absence of actual injury. If the patient submits to surgery under an express consent not limited by express prohibitions, he impliedly consents to such further extensions as facts discovered in course of operation call for in performance of good surgery, as long as these are done bona fidely to relieve his primary complaint and do not materially increase the total risk involved. Further, consent to surgery may be implied in law where emergency exists constituting imminent threat to life or health and it is impracticable to obtain express consent of the patient or of his legal representative.

It would thus appear that since there are no cases in point and because of the rather speculative outcome in respect to liability, that a physician incurs a definite risk of civil liability for performing non-therapeutic sterilization operations. It would be wise to first determine whether any medical justification exists for such an operation and, if believed to be necessary, to get the opinion of an independent physician as to that necessity.

Eugenical sterilization has sometimes been compared with other procedures of preventive medicine. The advocates have justified sterilization on the same grounds as compulsory vaccination, the theory being that public health or welfare merits pre-

ventive medicine and that the means adopted are proper. In vaccination, it has been scientifically proved that the public health is promoted by such measures. In the case of sterilization laws, it is necessary to proceed with greater caution. Experts are still in conflict as to exactly what conditions are inheritable.

At the present time, some authorities seem to believe that many of the statutes existing today may be too broad in their coverage of possible persons to be sterilized. The American Neurological Association's Committee for Investigation of Sterilization found that:

1. Schizophrenia and manic-depressive psychosis have an inherited basis although they likely have an environmental root.
2. The bulk of feeble-mindedness rests on heredity basis of some type.
3. There is some constitutional etiologic basis for epilepsy but it is not proved to be hereditary origin.
4. Crime is generally non-hereditary in nature.

The problem of eugenical sterilization still seems to resolve itself into the fact that we are dealing with a condition that is rather nebulous and, until definite inherited tendencies are shown in certain diseases, legislatures and the medical profession should proceed with caution, for life in its procreative stage is concerned.

AMERICAN COLLEGE OF SURGEONS TO HOLD SECTIONAL MEETING IN PORTLAND

The fifth of a series of seven Sectional Meetings of the American College of Surgeons will be held in Portland, Oregon, March 26 and 27, with headquarters at Hotel Multnomah, announces Dr. Henry W. Cave of New York, President. Attendance will be largely from California, Nevada, Oregon, Washington, Alberta and British Columbia, although there is no geographic restriction. The Portland meeting will be followed by meetings in Denver, April 6-7, and Detroit, May 10-11.

Heading the Committee on Local Arrangements for the Portland, Oregon, meeting is Dr. Louis P. Gambee. Hospital conferences will be held on both days concurrently with the medical sessions, for discussion of such topics as "The Role of the Hospital in Civil Defense," "Maintaining High Standards of Service to the Patient in the Small Hospital," "Teamwork in the Operating Room," "Adaptation of Hospital Service to Special Types of Patients—Chronic, Cancer, Geriatric, Psychiatric, etc.," and various aspects of hospital organization and relationships.

Case Report

POST-CAVAL URETER

A CASE PRE-OPERATIVELY DIAGNOSED WITH CONFIRMATION AT SURGERY

A. W. MIDDLETON, M.D.
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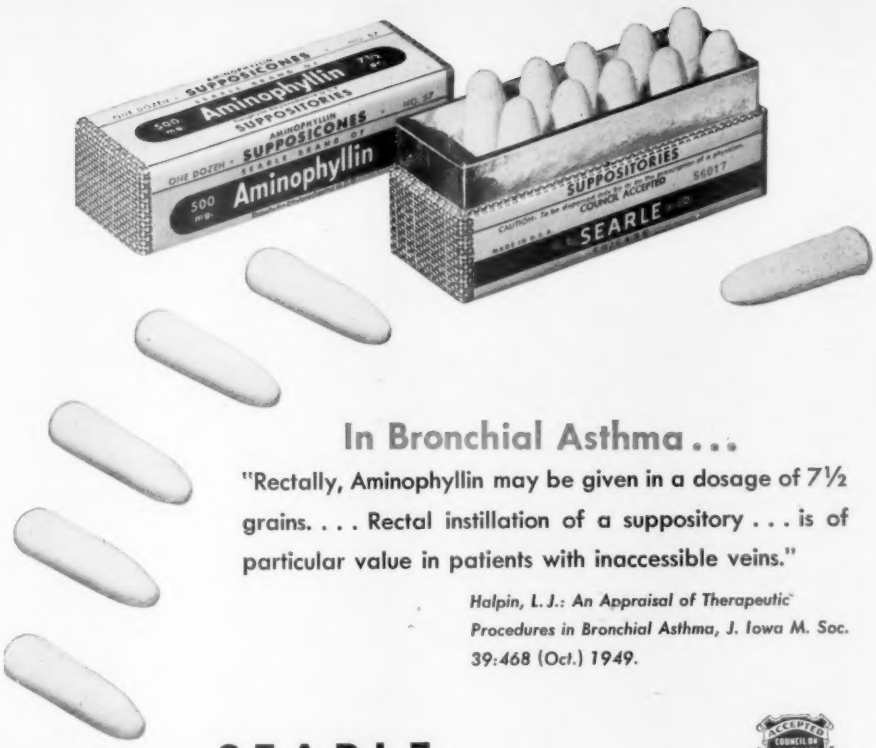
Post-caval ureter (retro-caval or circum-caval ureter) is an anomaly so infrequently encountered or described in the medical literature as to merit the report of an additional case. The most recent review of the literature lists only forty previously described cases. In the great majority, the true nature of the condition was never suspected and was disclosed only at surgical exploration or at autopsy. The present case is the sixth in which the diagnosis was made pre-operatively and was confirmed at operation. Of additional interest is the fact that the kidney was functionally normal and was considered worthy of conserving by division and reanastomosis of the ureter. Unfortunately, the early promise of successful anastomosis was not realized. Stenosis developed as healing occurred, requiring eventual nephrectomy.

Most embryologists are agreed on the genesis of these anomalies. They represent an aberration in vascular development, rather than renal. At one stage in early embryonic life, the normal station of the primitive kidney is behind the post-cardinal vein, or precursor of the inferior vena cava. The course of the ureter is therefore around the vein. In animals of the lower zoologic order, as the rabbit or cat, this relationship persists not infrequently. In man, it rarely does. The numerous veins that disintegrate to form the definitive vena cava, do so at different rates. A more rapid rate of disappearance on the left side accounts for the post-caval ureter occurring almost exclusively on the right.

Of particular interest in this case was the discrepancy between the clinical history and the lesion as eventually demonstrated by pyelography. Reasonably thorough examination of the patient by competent phy-



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sicians on several occasions had not suggested the remotest connection of the patient's symptoms and the urinary tract, either by physical signs or by laboratory data. On the other hand, when pyelographic study was finally done, the suggestion of post-caval ureter was so evident that any other diagnosis would have been illogical.

The localized dilatation of the upper ureter and the extreme medial deviation of the mid-ureter are radiographic findings hardly compatible with any other kind of lesion.

CASE REPORT

The patient was a 31-year-old male whose only significant complaint was recurrent pain in the right lower abdominal quadrant. For at least ten years there had been some suggestion of this complaint, but attacks were usually so mild that medical assistance was not seriously considered. Typically there was no associated bowel dysfunction, vesical irritability, nor pain radiation. On two occasions, a diagnosis of possible appendicitis had been made, but in each instance the physician confessed uncertainty because of normal physical findings and normal blood counts and urinalyses.

In August, 1947, occurred the first really severe pain that the patient had ever experienced. As in previous attacks, the pain was localized to the right lower quadrant. At the first examination, within an hour of the attack's onset, there was neither rigidity nor tenderness. Urinalysis was negative except for three red cells per average high power field. An x-ray film of the kidney and bladder area was somewhat obscured by gas shadows, but one could reasonably conclude that no stone shadow was present. As a palliative procedure, an effort was made to pass a catheter to the right renal pelvis. A sense of obstruction was met at the twenty-five centimeter mark, but this was overcome by moderate pressure. At thirty centimeters, there was a rapid flow of thirty cubic centimeters of slightly bloody urine. Relief of pain was immediate and complete. Within four hours, it had recurred with even greater intensity. Fifteen hours later, right ureteral catheterization was again attempted, but with no success. An impassable obstruction was met at twenty-five centimeters above the bladder. Retrograde pyelography revealed a most bizarre pattern. The tip of the catheter overlaid the body of the second lumbar vertebra. From this point, a fine trickle of medium coursed laterally, almost in a straight line, and abruptly flared out into a moderately dilated renal pelvis. The renal outline appeared normal in size and position. (Fig. 1).

For the following six days, the clinical course was one of a septic blocked kidney. Under treatment with a small dose of sulfathiazole and full therapeutic doses of penicillin, fever and pain gradually disappeared. Two weeks later, the sole residue of the painful episode was a sprinkling of pus cells in a grossly clear urine.

Intravenous urography showed a normal-appearing left kidney and ureter. On the right side, the appearance time was only slightly delayed. There was a moderate dilatation of the pelvis and the ureter for a few centimeters directly below. The remainder of the ureter from this point bent abruptly toward the mid-line, and followed the same angulated course across the vertebral bodies as previously depicted by retrograde pyelography (Fig. 2).

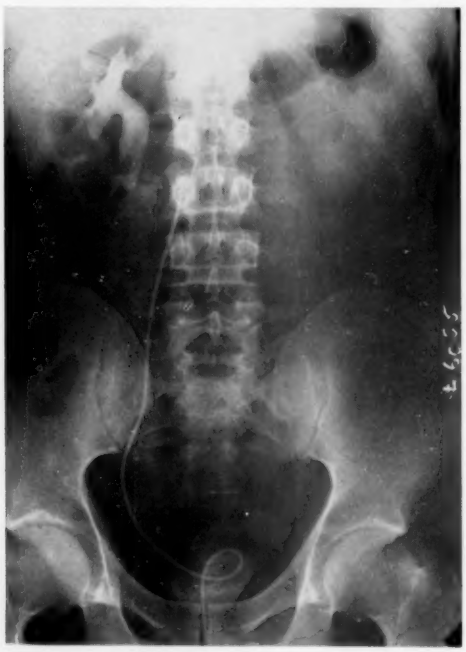

Fig. 1. Retrograde pyelogram.

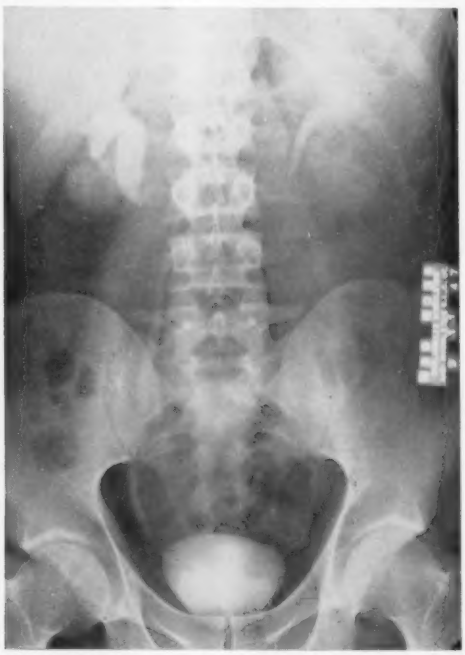

Fig. 2. Intravenous pyleogram.

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No further proof seemed necessary to establish a diagnosis of retro-caval ureter, so surgical exploration was undertaken. Through the usual renal type of incision, directly under the right twelfth rib, the muscles were divided down to the renal fossa. By blunt dissection, the kidney was freed of surrounding fascial attachments. The renal pelvis appeared moderately dilated down to the point where it disappeared behind the vena cava. The dissection of the lower ureter was carried from below upwards until the upper half of the ureter and the pelvis were completely freed except for the small segment behind the vena cava. This post-caval segment did not exceed two centimeters in length. Apart from its constriction, it appeared fairly normal, and could likely have been utilized for the anastomosis. The possible danger of liberating it from the vena cava seemed too formidable. Transection of the ureter was therefore done above and below this segment just beyond the point of emergence from behind the vessel (Fig. 3). An end-to-end anastomosis of the freed ureteral segments was done around a number 10F. rubber splinting catheter. The upper end of the splint was carried through the pelvis and brought out of the lower pole through a stab wound in a lower calyx (Fig. 4). Its course was paralleled through the kidney by a number 22F. mushroom catheter, with the button placed in the pelvis to provide nephrostomy drainage.

The postoperative course gave some concern because of unforeseen difficulties in maintaining nephrostomy drainage. The original plan was to divert the urine above the anastomosis for at least two weeks. To our dismay, the tube was partially extruded on the eleventh post-operative day. Rather than to jeopardize the anastomosis by the danger of a partially plugged fistulous tract, the nephrostomy tube was pulled out. The splinting catheter was removed on the fifteenth postoperative day.

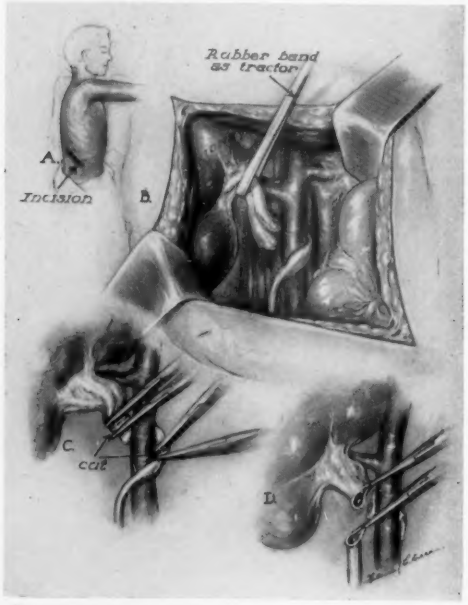


Fig. 3. Surgical exposure and division of post-caval ureter.

Two days later, the temperature rose to 101 degrees, where it remained for forty-eight hours, and then dropped to normal. When fever was present, there was no urinary drainage from the loin. With subsidence of fever, the drainage resumed. Within a few days thereafter, the drainage rapidly diminished. The wound was completely healed and the patient afebrile by the twenty-second day.

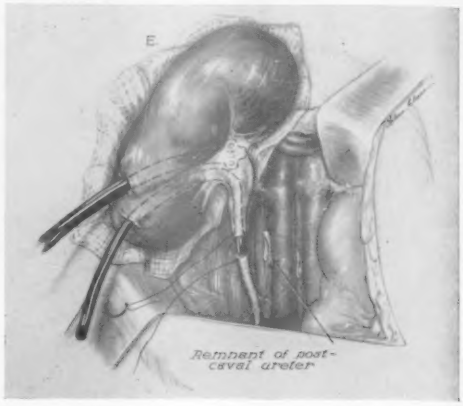


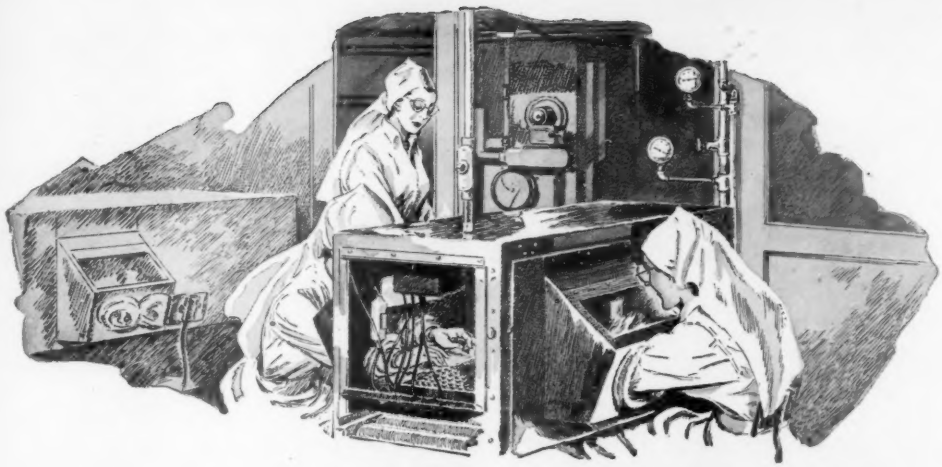
Fig. 4. Plastic repair over splinting catheter. Nephrostomy drainage.

On the fourth postoperative week began a series of episodes of fever, pain in the right loin, and pyuria. These episodes became progressively more severe and more frequent. In the absence of inflammatory reaction in the healed incision, the most likely explanation of the attacks was stenosis of the ureteral anastomosis. Accordingly, the ureter was dilated with bulb dilators. At the first dilatation, an obstruction was met at twenty-five centimeters, but was easily overcome and was dilated with a succession of bulbs to number 12F. Two weeks later, a number 8F. bulb was passed with moderate difficulty, but larger sizes met an impassable obstruction at twenty-five centimeters. A third attempt, another two weeks later, was a complete failure. Catheters of smallest size got no farther than twenty-five centimeters. Ureteral occlusion at this level was further verified by retrograde pyelography. Excretory urography showed absence of function on the right side in all films made up to ninety minutes post-injection. Right nephrectomy was done in April, 1948. Grossly, the kidney was of normal size, but it appeared pale, and had a firm consistency suggesting advanced fibrosis.

The patient made a satisfactory convalescence and has since been in excellent health.

Summary

An example of post-caval ureter is presented. The diagnosis was made pre-operatively on the basis of pyelographic deformity. The retro-caval segment of ureter was excluded, and end-to-end anastomosis of the divided segments was done. Stenosis at the site of union caused rapid renal deterioration, requiring nephrectomy three months after ureteral anastomosis.



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IN UPPER RESPIRATORY INFECTIONS

prompt response

in acute laryngotracheal bronchitis

CASE	DIAGNOSIS	INFECTING ORGANISM	DAYS TREATED	TOTAL DOSE GM.	ADMINISTRATION	CONDITION AND RESULT
16	Acute laryngo-tracheal bronchitis	Hemophilus influenzae	3	12	oral	Marked improve-ment in 24 hours. Recovery

Case report taken from Herrell, W. E.; Heilman, F. R., and Wellman, W. E.: Ann. New York Acad. Sc. 53:448 (Sept. 15) 1950.

CRYSTALLINE

Terra

prompt response

in acute follicular tonsillitis

CASE	DIAGNOSIS	CULTURE		DAILY DOSE GM.	NUMBER OF DAYS TREATED	RESULT
		SOURCE	ORGANISM			
29	Acute follicular tonsillitis	throat	Strepto-coccus pyogenes	4	3	Prompt clinical response. No fever after 24 hours of treatment

Case report taken from Herrell, W. E.; Heilman, F. R.; Wellman, W. E., and Bartholomew, L. A.: Proc. Staff Meet., Mayo Clin. 25:183 (Apr. 12) 1950.

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prompt" response
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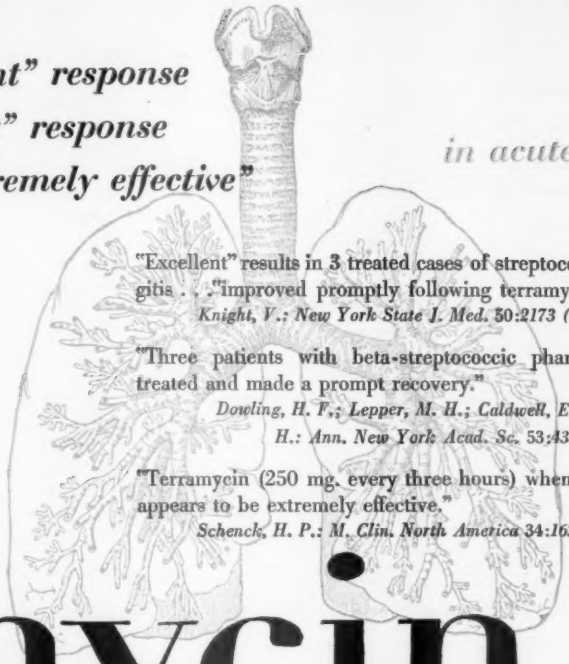
in acute pharyngitis



"Excellent" results in 3 treated cases of streptococcic pharyngitis . . . "improved promptly following terramycin therapy."
Knight, V.: New York State J. Med. 50:2173 (Sept. 15) 1950.

"Three patients with beta-streptococcic pharyngitis were treated and made a prompt recovery."
Dowling, H. F.; Lepper, M. H.; Caldwell, E. R., and Spies, H.: Ann. New York Acad. Sc. 53:433 (Sept.) 1950.

"Terramycin (250 mg. every three hours) when given orally appears to be extremely effective."
Schenck, H. P.: M. Clin. North America 34:1621 (Nov.) 1950.

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Organization

COLORADO
State Medical Society

PAPERS AND EXHIBITS INVITED FOR STATE MEETING

Members of the Colorado State Medical Society who desire to offer scientific papers or scientific exhibits for the Annual Session to be held next September should get in touch immediately with Dr. Kenneth C. Sawyer, 1820 Gilpin Street, Denver, Chairman of the Committee on Scientific Work.

Dr. Sawyer announces that there are still a number of places available on the program for papers, whether or not illustrated with slides or movies, which will interest general practitioners and the broader specialties. Also, it is planned this year to feature a larger number of scientific exhibits than were shown in 1950, when exhibit space was at a premium.

Members of the Society are cautioned that the By-Laws limit Annual Session presentations to fifteen minutes, except for those given by guest speakers.

It's Time to Think Of Easter Seals

The "Spring of the year" brings to mind the annual Easter Seal campaign by the Colorado Society for Crippled Children and Adults. Heading the state drive in Colorado is Federal District Judge Lee Knous.

The Crippled Children's Societies throughout the region provide therapeutic treatment for handicapped youngsters suffering from many diseases and conditions. Rheumatic heart, cerebral palsy, polio, epilepsy, speech defects are a few of the ailments that are treated. Three fields of therapy—speech, physical, and occupational—are found at the many treatment centers operated by the various state Crippled Children's Societies, or "Easter Seal Agencies," as they are known.

Many members of the State Medical Societies in the Rocky Mountain Region contribute their time and services to the clinics held as often as thrice weekly at the treatment centers.

The "Easter Seal Agencies" do not receive financial assistance from any other agency. The once-a-year Easter Seal Drive provides the only source of revenue for the Society, which provides treatment for several thousand children in this area. In most cases, this treatment would not be otherwise available to these youngsters, for financial or other reasons.

Tribute to Doctor As a Citizen

The contribution of a physician to the public good through service in the Senate of the Colorado Legislature is brought into sharp focus by Bert Hanna, veteran Denver Post statehouse reporter, who recently paid tribute to the efforts of Dr. Edgar Eliff of Sterling. Writing in his "Notes From the Statehouse" in The Denver Post, Hanna reported:

"A freshman Senator who is making a very favorable impression in his first year is Dr. Edgar A. Eliff, eye, ear, nose and throat specialist from Sterling. . . . Making a great sacrifice from his practice to serve the state, Dr. Eliff is an example of the type of professional man and community leader the state needs a lot more of in its assembly. . . .

COLORADO
Medical School Notes

PROFESSOR OF MEDICINE CHOSEN

Appointment of a University of California professor to head the Department of Medicine at the University of Colorado School of Medicine was announced recently by Dr. Robert C. Lewis, Dean of the Medical School.

Dr. Gordon Meiklejohn, widely known virologist and Assistant Professor of Medicine at the California school, will assume his duties as professor at the C.U. Medical Center in Denver on April 1. He replaces Dr. Robert S. Liggett, who resigned as head of the department to enter private practice. Dr. Liggett will continue to serve as Clinical Professor of Medicine.

A Navy veteran of wide medical experience, Dr. Meiklejohn comes to Colorado with a brilliant record. He was educated at the University of Wisconsin, Yenching University in Peking, China, and at McGill University. He interned at Montreal General Hospital in Montreal, Canada, and at the University of California Hospital in Berkeley from 1937 to 1940. Since then he has been associated with the university there and with the California State Department of Public Health, the latter as a research associate and consultant.

The "estrogen preferred by us is 'Premarin,' a mixture of conjugated estrogens, the principal one of which is estrone sulfate."

Hamblen, E. C.: North Carolina M. J. 7:533 (Oct.) 1946.

In treating the menopausal syndrome with "Premarin," Perloff* reports that "Ninety-five and eight tenths per cent of patients treated with 3.75 mg. or less daily obtained complete relief of symptoms"; also, "General tonic effects were noteworthy and the greatest percentage of patients who expressed clear-cut preferences for any drug designated 'Premarin.'"

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*Perloff, W. H.: Am. J. Obst. & Gynec. 58:684 (Oct.) 1949.

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COLORADO
State Health Department

DROP IN REPORTED CASES OF TUBERCULOSIS

Colorado had 758 fewer total reported cases of tuberculosis in 1950 than in 1949. There were 5,150 persons with tuberculosis known to the State Department of Public Health in 1950, as compared with 5,908 in 1949. Three thousand forty of these were among people living in Denver, the remaining 2,110 were in fifty-eight of the other sixty-two counties of the state.

The Central Case Register maintained by the Tuberculosis Control Section, State Department of Public Health, does not include tuberculosis among Denver residents since the Denver Bureau of Health and Hospitals maintains its own case register. The following summary does not include the Denver figures, but is based on the 2,110 cases in the Central Case Register.

Seven hundred fifteen new cases of tuberculosis were added to the Central Case Register in 1950. The variety of sources from which tuberculosis cases are reported is shown in the following list, which shows what per cent of the total each source reported:

Health Department diagnostic clinics (Nearly half of these cases were found through mass x-ray programs.)	21.3%
Sanatoria	19.7%
Veteran's Administration	19.7%
Death Certificates	11.0%
Private Physicians	9.8%
Transfer from other State Health Departments	6.0%
Fitzsimmons Army Hospital	5.7%
Local Health Departments	3.5%
Mental Institutions	1.8%
General Hospitals	1.4%

During 1950, the Tuberculosis Control program made an effort to get all active cases under proper medical supervision. Twenty-one per cent of the known tuberculosis patients were in hospitals or sanatoria at the end of 1950. Of the remaining 1,659 at home, 204—12 per cent—were known to have active tuberculosis.

Although 204 active cases remained at home, it should be emphasized that 76 per cent of these patients lived in counties having either local health services or at least public health nursing services. They had the advantage of close supervison and follow-up services that such patients need.

Mass x-ray programs were conducted in nineteen counties last year in conjunction with the Colorado Tuberculosis Association. Eight hundred fifty-seven persons were referred to private physicians as a result of these surveys.

When properly planned and carried out, the mass chest x-ray survey is an invaluable tool in finding early cases of tuberculosis. An evaluation of results of past years' surveys has brought about some major changes in this important program.

Formerly, limited surveys were made in all areas of the state. When there were no local health department or public health nursing services, follow-up of suspicious cases has been very unsatisfactory. Community participation has been poor. The average survey x-rayed only from 8 to 10 per cent of the population. Unless a high percentage of the population can be reached and adequate follow-up made on all suspected cases, mass surveys fail to accomplish much in controlling tuberculosis.

All current and future surveys will be intensive programs concentrated in areas known to have a high incidence of tuberculosis. They will center around areas having local health departments or at least public health nursing services.

With the approval of the local medical society, "re-take" or "diagnostic" centers will be established in conjunction with all survey programs. Each local health department will arrange for taking large x-rays, doing sputum examinations and taking brief histories on all persons with suspicious chest films. Wherever facilities are available, this will be expanded to provide for a diagnostic center. In either case, all information will be sent to the individual's physician.

COLORADO
Hospital Association

Ideas for Easing That Bed Shortage

The following appeal and list of suggestions regarding hospital bed shortage, although sent to Denver physicians by the Denver Hospital Council, contains ideas worth reading in any city or town where the same problem exists. For that reason it is reproduced here.

The membership of the Denver Hospital Council respectfully and urgently requests the cooperation of each doctor of the Denver County Medical Society to help solve a special problem which affects all doctors' patients in hospitals and the services rendered to both the patient and the doctor. This problem is the late discharge of patients from hospitals and the consequent and additional problem of the late admittance of new patients to hospitals.

In the days when hospitals ran close to 80 per cent occupancy, this was not as acute a problem as it is today when hospitals run close to 100 per cent occupancy. It is a most difficult problem for hospitals to get the necessary employees to adequately cover the three to eleven shifts. This is particularly true of the nursing department. The nurses on duty between 3:30 and 6:30 p.m. are trying to carry out patient care, help physicians who are making late rounds, handle emergencies among their patients on the floor, control the visiting of patients' relatives and friends and order late food trays. It is impossible for the hospital organization to serve its patients properly when many patients go home from the hospital after 4:00 in the afternoon. This situation can be corrected if each doctor will try to follow these suggestions by the Denver Hospital Council:

"1. It is considered possible in the majority of cases for the doctor to estimate one day in advance that the patient may possibly be dismissed from the hospital the next day. If the doctor would then inform the head nurse on the landing, the patient himself and the patient's family, arrangements could more easily be made by the patient to leave the hospital by noon the following day.

"2. A word of fairness to the patient by the doctor asking him to leave before noon to make room for cases badly in need of hospitalization

will get the job done. This word must come from the attending physician and no one else.

"3. The hospital bed situation today in Denver is abnormal, and to make the best use of the available hospital facilities, it is necessary that each doctor instruct his hospital patients who are elective cases and not emergencies, that they must be in the hospital before 3:00 p.m. regardless of their personal likes and dislikes and personal business.

"In conclusion, if each doctor will try to carry out these suggestions, it will mean much better services to incoming hospital patients and earlier and better hospital care for emergency cases."

A mandatory rule could be made by the hospitals of Denver to the effect that all cases other than emergencies who do not arrive before a given time would not be admitted but would be made to come back the next day or some succeeding day. The Denver hospitals are reluctant to come arbitrarily to such a ruling, but hope that it can be done on a cooperative basis.

THE DENVER HOSPITAL COUNCIL
COMMITTEE.

UTAH
State Medical Association

Obituary

H. Z. LUND

Dr. Herbert Z. Lund, 74, prominent Salt Lake physician and churchman, died Monday evening of a heart attack.

Dr. Lund was widely known as a student of philosophy and as a public speaker. One of his many talents was his skill in telling humorous dialect stories to the delight of his wide circle of friends. He was born January 17, 1877, in Ephriam, Utah. He received his early education in the Ephriam public school and Snow Academy. He was graduated from Brigham Young University, Provo, Utah, in 1897 and afterward taught school in Ephriam for two years. From 1899 to 1901 he served on a mission for the Church of Jesus Christ of Latter Day Saints in the southern states. Upon completion of his mission he entered the George Washington University Medical School where he received his M.D. degree in 1905. He did postgraduate work in obstetrics at Presbyterian Medical Center, New York, and in 1906 came to Salt Lake City to enter medical practice. From that time until his death he practiced general medicine and surgery in Salt Lake City.

Dr. Lund was a member of the Salt Lake County Medical Society, the Utah State Medical Association and the American Medical Association.

Dr. Lund is survived by a daughter, Mrs. Wesley J. Williamson of Los Angeles; four sons, Dr. Herbert Z. Lund, Jr., Cleveland, Ohio; Richard J. Lund, Washington, D. C.; Dr. Anthony J. Lund, Ogden, Utah, and Paul J. Lund of Salt Lake City, Utah.

WESTERN INSTITUTE ON EPILEPSY

The third Western Institute of Epilepsy, which had been scheduled tentatively for June 15-17, 1951, will be held instead the week-end of June 22-24. The meeting will be held in Salt Lake City, according to Dr. Harriot Hunter of Denver, President of the Institute.

Tuberculosis Abstracts

Issued Monthly by the National Tuberculosis Association

Vol. XXIV MARCH, 1951 No. 3

The physician may be led to suspect tuberculosis as a diagnosis by either the history or the physical examination of the patient. When this point is reached, the laboratory is prepared to give valuable assistance in helping him to determine diagnosis of tuberculosis.

THE VALUE OF SPECIAL EXAMINATIONS IN THE DIAGNOSIS OF TUBERCULOSIS

Recent advances in the definite treatment of tuberculosis and other diseases have increased the importance of proving the diagnosis before planning a program of treatment. For this reason, a review of the present status of the various special examinations which help in the diagnosis of tuberculosis with special emphasis on their values and their limitations is timely.

Roentgenology in the Diagnosis of Tuberculosis

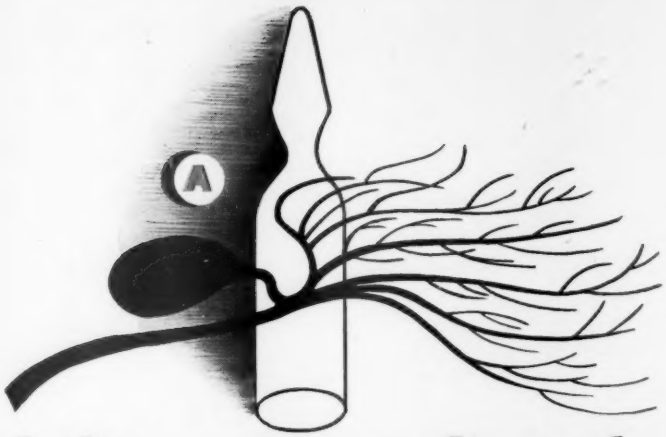
The two fundamental questions to be considered from a roentgenologic standpoint are—does the roentgenogram show abnormal features? and—does the abnormality represent pathologic changes associated with or caused by a tuberculous infection? The public and the medical profession are well aware of the importance of the so-called mass chest survey. Its value rests on the accuracy of interpretation of the roentgenograms. Whether or not an abnormality represents changes due to a tuberculous infection cannot be unequivocally answered by study of the roentgenogram. The shadows produced by pathologic changes resulting from this infection are often sufficiently characteristic so that a reasonable diagnostic estimate of pulmonary tuberculosis can be made. However, tuberculosis may be simulated roentgenologically by acute and chronic inflammatory processes, neoplastic lesions and other conditions that decrease the radiability of pulmonary tissue.

It is not enough to make a diagnosis of suspected tuberculosis, although this is often a valuable working judgment. An exact etiologic diagnosis must be made, but this is not the responsibility of the roentgenologist. It is enough that the x-ray locates the areas of disease. Among older adults, the possibility that a pulmonary lesion may be malignant suggests that prolonged observation by roentgenologic examination is dangerous. It is impossible to differentiate new primary lesions from those of the reinfection type by roentgenologic examination alone. Not all calcareous deposits in the roentgenograms of the chests of those people who react to tuberculin are due to tuberculosis. Failure to demonstrate the tubercle bacillus in suspected cases does not, however, prove its absence and it is here that serial roentgenologic examinations may be most helpful.

The Tuberculin Test

The tuberculin test, administered intracutaneously by the method of Mantoux, has been available since 1908 to the medical profession as an aid in the diagnosis of tuberculosis particularly in children and in epidemiologic case-finding. The incidence of positive reactors to the tuberculin test among adults has fallen to a level where the test assumes considerable diagnostic importance in older individuals.

Only two types of tuberculin have had widespread acceptance. Old tuberculin ("OT") is the fluid medium in which tubercle bacilli have been grown. This is sterilized by heat, filtered, and concentrated before dilution to the appropriate dosage. The second prepara-



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tion, known as "purified protein derivative" or "PPD," is a highly potent purified tuberculoprotein prepared by chemical fractionation from the cultures of tubercle bacilli on nonprotein synthetic culture mediums. Since PPD is more stable and much more potent than old tuberculin, it is probably the tuberculin of choice.

A positive tuberculin reaction indicates that the individual displaying it has, at some time, harbored tubercle bacilli in his body. It does not mean necessarily that active clinical tuberculosis is present or has ever existed. In an adult, a positive reaction may be the residual of a spontaneously healed tuberculosis contracted during youth. The single strength PPD tuberculin test (0.0001 mg. is used at Mayo Clinic for adults) should detect about 95 per cent of the cases with significant tuberculosis.

Histopathologic Examination for Tuberculosis

The histopathologic examination for tuberculosis is presumptive only, and the diagnosis must be established finally by isolating and identifying the tubercle bacillus. The histopathologic pattern of tuberculosis may be due to any of several other agents and the tissue reaction to the tubercle bacillus may vary so much that histologic examination may not even suggest the presence of the organism. Tissue removed for biopsy should be so selected and handled that satisfactory bacteriologic studies may be made if the condition found is not neoplastic.

Bacteriologic Examination for Tuberculosis

The bacteriologist employs three procedures which may aid in the diagnosis of tuberculosis: (1) the smear stained for acid-fast bacilli, (2) culture, and (3) guinea pig inoculation. They are only aids; the clinician makes the diagnosis. It is presumed, however, that a positive result obtained on guinea pig inoculation for tuberculosis constitutes indirectly a diagnosis for the patient.

The finding of acid-fast bacilli in a smear is only suggestive of the diagnosis of tuberculosis. Similarly, a smear that does not show acid-fast bacilli is of little value in ruling out this disease. The cultural technic for isolating and identifying acid-fast bacilli is a satisfactory screening procedure when performed by highly skilled workers. All newly isolated strains of acid-fast bacilli should be tested for virulence in animals. The inoculation of guinea pigs is the most satisfactory single procedure for detecting tuberculosis in the variety of specimens submitted to the diagnostic laboratory.

The Clinician's Responsibility in the Diagnosis of Tuberculosis

The first responsibility of the clinician is to suspect tuberculosis frequently, even in apparently healthy people, and to arrange for the appropriate laboratory studies made to determine if the disease is present. In spite of invaluable aid from the various laboratories, the clinician is responsible for making the diagnosis. He should correlate the results of all special examinations with each other and with the history of the illness and the physical findings before he attempts a diagnosis. Usually thorough investigation yields convincing evidence for or against the diagnosis of active tuberculosis.

The clinician must attempt to separate the inactive from the active tuberculous lesions so that the latter can be treated without delay. Nontuberculous lesions, such as early pulmonary neoplasms, must be distinguished from tuberculosis lesions promptly, so that surgical treatment can be instituted while the lesions are still resectable. These are not easy tasks, because examination of each patient will yield a different combination of findings on which to base the decision. As Pinner has said in this connection, "Judgment acquired by experience is more helpful than any written rules."

Symposium on the Value of Special Examinations in the Diagnosis of Tuberculosis, David T. Carr, M.D., M.S.; Colin B. Holman, M.D.; George G. Stilwell, M.D.; John R. McDonald, M.D., M.S.; Lyle A. Weed, M.D., M.S., Ph.D.; Gerald M. Needham, Ph.D., Proceedings of the Staff Meetings of the Mayo Clinic, July 19, 1950.

The Book Corner

New Books Received

Methods in Medicine, The Manual of the Medical Service of George Dock, M.D., Sc.D., Formerly Professor of Medicine, Washington University School of Medicine; formerly Physician-in-Chief, Robert A. Barnes Hospital, St. Louis. A Comprehensive Outline for Clinical Investigation, Management, and Treatment of Patients With Various Medical Disorders: By George R. Herrmann, M.D., Ph.D., Professor of Medicine, University of Texas Medical Branch at Galveston; Director of the Cardiovascular Service and Heart Station, University of Texas Hospitals; Consultant in Medicine to the Surgeon General, U. S. Army; Consultant in Vascular Diseases to the Marine Hospital, U.S.P.H.S. Second edition, completely revised. St. Louis. The C. V. Mosby Company, 1950. Price, $7.50.

When Minds Go Wrong, A Simple Story of the Mentally Ill—Past, Present and Future: By John Maurice Grimes, M.D., twenty years a psychiatrist, four years a staff-member of the Council on Medical Education and Hospitals of the American Medical Association; author of "Institutional Care of Mental Patients in the United States." First Edition. Illustrations by K. Alexandra White; published and distributed by the author, 5209 S. Harper Avenue, Chicago 15, Illinois.

Physiology of the Eye Clinical Application: By Francis Heed Adler, M.A., M.D., F.A.C.S.; William F. Norris, and George E. de Schweinitz, Professor of Ophthalmology, School of Medicine, University of Pennsylvania, and Consulting Surgeon, Wills Hospital, Philadelphia. With 319 illustrations, including two in color. St. Louis, The C. V. Mosby Company, 1950. Price, $12.00.

Color Atlas of Pathology: Prepared under the auspices of the U. S. Naval Medical School of the National Naval Medical Center, Bethesda, Maryland. Hematopoietic System—Reticulo-Endothelial System—Respiratory Tract—Cardiovascular System—Liver Alimentary Tract—Kidney and Urinary Tract—Musculoskeletal System. Illustrated with 1,053 figures in color on 365 plates. Philadelphia—London—Montreal. J. B. Lippincott Company. Price, $20.00.

Arthritis and Common Sense: By Dan Dale Alexander. Boston, Bruce Humphries, Inc., Publishers. Price, $2.50.

Year Book of the State of Colorado—1948-1950.

Primer on Fractures: Prepared by the Special Exhibit Committee on Fractures in Cooperation with the Committee on Scientific Exhibit of the American Medical Association; Sixth Edition. Paul B. Hoeber, Inc., Medical Book Department of Harper & Brothers, 1951. Price, $2.00.

Atlas of Histologic Diagnosis in Surgical Pathology: By Karl T. Neubuerger, M.D., Professor of Pathology, University of Colorado School of Medicine, Denver, Colorado, with a section on Exfoliative Cytology, by Walter T. Wikle, B.S., M.S., M.D., Assistant Professor of Pathology, University of Colorado School of Medicine, Denver, Colorado. Photography by Glenn E. Mills, B.A., M.A., De-

partment of Visual Education, University of Colorado School of Medicine, Denver, Colorado. Baltimore, The Williams & Wilkins Company, 1951. Price, $11.00.

Physical Diagnosis: By Ralph H. Major, M.D., Professor of Medicine, the University of Kansas. Fourth Edition, illustrated. W. B. Saunders Company, Philadelphia and London, 1951. Price, $6.50.

The Science of Health (Second Edition): By Florence L. Meredith, B.Sc., M.D., Fellow of the American Medical, American Public Health, and American Psychiatric Associations. The Blakiston Company, 1951, Philadelphia-Toronto. Price, $3.75.

Book Reviews

Saw-Ge-Mah (Medicine Man): By Louis J. Gariepy, M.D. Northland Press, Saint Paul, Minnesota, 1950. Price, $3.00.

Considered as fiction, "Saw-Ge-Mah" has little to warrant its being of lasting value. The story has directness and vigor, but the attempt to make Dr. Hal Adams a "real live man" is too patent, too forced, and although the 326 pages of the book are crammed with action and material one is seldom in suspense as to the outcome and seldom if ever moved by Dr. Adams' joys and sorrows. The treatment is too objective, too scientific and it is those qualities which militate against the reader's identifying himself with the emotional crises of the characters. Hal's father, Gordon Adams, is the most human living person in the book. Perhaps it is the innate prude cropping out in the reviewer, but there seems to be too great an emphasis placed on sex, with a capital S, and the predatory female. Also, the lecherous incidents left the reader with the impression that they were merely introduced to establish Hal's manhood, but they were not convincing either in that respect or in themselves as simple reporting. They never convey the passion they should portray.

It is most unfortunate that the very format of the book is unattractive, especially the cover which is a drab brown simulated leather. And there are many typographical and proof-reading errors such as misspellings and predicateless sentences which distract the reader's attention and create an unfavorable reaction.

Although the usual statement disavowing resemblance to actual persons living or dead appears at the beginning, one feels strongly that many incidents must have been drawn from the author's experience. To anyone familiar with the drama inherent in the practice of medicine, the more improbable the incident the truer it seems. However, in this instance, the very drama and improbability detract because the average reader would be incredulous and reject the uncanny influence of coincidence on the hero's life.

The finest portions of the book are those which are really essays concerning medical education and medicine, its practice and ethics. There is a great deal of valuable advice to young doctors and medical students, but it is not adroitly integrated with the story material. Because the book is not likely to reach an extensive audience, it would have been better had those essays been published separately as such so that they might be accessible to those who could profit by them. As it is they may be buried in a piece of fiction with a limited distribution. This is lamentable just as it is that George Eliot's "Middlemarch" is seldom known by physicians, the one group of persons who could best appreciate and understand it. On the other hand, Oslar's "A Way of Life" is a model of style, material and form for conveying to a specialized audience the author's message.

MINDELL W. STEIN, M.D.

An Atlas of Human Anatomy: By Barry J. Anson, Ph.D., Professor of Anatomy, Northwestern University Medical School. W. B. Saunders Company, Philadelphia, MCML London. Price, $11.50.

This atlas is a departure from the standard atlases of human anatomy which illustrate the more common morphology and relationships of anatomical structures; it depicts many of the variations and anomalies that are commonly observed in the dissecting room. The illustrations were prepared from dissections, and in many instances statistics are given in regard to occurrence of the particular variations. The illustrations are well executed and were done in line or wash drawings.

As one who has taught human anatomy for forty years this atlas impresses me as a valuable adjunct for students who are beginning the direct study of the human body in the dissecting room. It should help to impress the student that text book descriptions represent the more common pattern of morphology and relationships and that the particular cadaver he is working on may contain many variations from the textbook descriptions. Further, it should serve to impress upon him that no two human individuals are identical in every particular. For the physician in practice, and particularly the surgeon, this atlas is a ready source of information on anatomical relations and variations that may be encountered.

There are not many errors in the description of the figures although some may be encountered as, for example, on page 32 where reference is made to exposure of "the maxillary nerve where it enters the temporal fossa, through the foramen ovale in the large wing of the temporal bone" (undoubtedly intended to read mandibular nerve and sphenoid bone); on page 153 the adductor pollicis muscle is labeled "M. add. pollicis brev." On page 155, e and f, "The adductor and short extensor . . ." was undoubtedly intended to read The abductor pollicis longus. . . . In some anomalous situations the descriptions of the illustrations do not indicate that the structures depicted are variations from the usually accepted locations and descriptions. Thus on pages 143 and 144 the bifurcation of the brachial artery is indicated to be in the upper part of the arm—a condition that one occasionally finds in the dissecting room, but, certainly, is not to be considered the usual manner of bifurcation. On page 140 the brachial artery is labeled as originating at the upper border of the tendon of the teres major muscle instead of the lower border. So also the profunda brachii artery is shown on p. 141 as originating from a common trunk with the posterior humeral circumflex, a condition that is sometimes found, but certainly not a common origin of the artery. On page 161 the illustration shows the median artery entering into the formation of the superficial volar arterial arch and no mention is made that this is not a common manner of formation.

Many modern textbooks of Anatomy are confused on what constitutes an aponeurosis and this atlas does not clarify the point. On page 165, in the explanation of figure a, it is stated: "The deep fascia has been partially removed from the muscles of the thumb and the little finger; it is intact over the middle of the palm, where, receiving the tendon of the palmaris longus muscle, **it becomes the palmar aponeurosis"** (bold type mine). The older textbooks of Anatomy (Piersol, Cunningham, Morris, Gray) clearly define an aponeurosis as a flattened sheet-like tendon. Webster's dictionary adds to the confusion with this definition: "Any of the thicker and denser of the deep fasciae which cover, in-

vest, and form the terminations and attachments of certain muscles. They differ from tendons only in being flat and thin. See Fascia." Under fascia, Webster states, "certain parts which form or are directly continuous with the sheaths of muscles and function as tendons are distinguished as aponeuroses." These definitions are not in agreement with anatomists' conceptions of these structures as clearly stated in most standard textbooks (see Gray's Anatomy 25th edition, p. 347).

The few errors and misconceptions in this atlas could have been avoided by a careful reading of the text and examination of the illustrations before publication by some experienced anatomist other than the author. There is no indication in the acknowledgments that this was done.

There is much to commend in this atlas. The numerous illustrations and diagrams leave very little that could have been added to clarify any particular region. The illustrations represent actual dissection at various levels, and are reproduced in proper sequence, thus applying relations in three dimensions. This book will make a valuable addition to the physician's working library.

IVAN E. WALLIN, M.D.

Pathologic Physiology: Mechanisms of Disease: Edited by William A. Sodeman, M.D., F.A.C.P., the William Henderson Professor of the Prevention of Tropical and Semi-Tropical Diseases, Tulane University of Louisiana School of Medicine; Senior Visiting Physician, Charity Hospital of Louisiana; Consultant in Medicine, U. S. Marine Hospital at New Orleans. Illustrated. W. B. Saunders Company, Philadelphia, MCML, London. Price, $11.50.

Here is a book in which twenty-five authors have collaborated to present a subject that lies somewhere between a formal text-book on physiology and pathology on the one hand and clinical medicine on the other. They have taken an inductive approach, analyzing symptoms and signs and the mechanism of their development. Treated from this perspective, pathology becomes a living process that is correlated with the clinical condition of the patient. As a result the clinical and scientific subjects are thoroughly integrated thus acquiring real meaning.

The circulatory system is given unusually comprehensive treatment, especially the more important features. Starting with hemodynamics of the blood vessels with its relation to peripheral vascular disease, the authors go on to discuss the heart and circulation in all its aspects. Congenital cardiovascular disease is discussed and also the use of cardiac catheterization in studying physiology. Other sections include the respiratory system; digestive system; blood and spleen; urinary tract; endocrine glands; water balance, nutrition; locomotor system; infectious diseases; allergy; and physical toxic and chemical agents. The known effects of ACTH and Cortisone are used to fill the gap in our knowledge and to make a workable explanation of the physiology of the endocrines and their relations to themselves and to the body tissues. The writing is simple and free use is made of diagrams to explain pathologic processes.

This reviewer feels that such a book deserves a place in the medical school curriculum particularly for juniors or seniors. It is also of value to practitioners who wish to be abreast of the latest concepts in mechanisms of disease.

LEON SHERMAN, M.D.

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The Ethical Basis of Medical Practice: By Willard L. Sperry, Dean of the Harvard Divinity School, with a Foreword by J. Howard Means, M.D. Paul B. Hoeber, Inc., Medical Book Department of Harper & Brothers. Price, $2.50.

This book of 185 pages covers in a penetrating and thoughtful analysis that broad zone of practice where physician is priest and priest is physician. Dr. Sperry is very critical of the clergy, and I agree with Dr. Means that "the Dean has been over-generous to my profession." Such chapter headings as "The Nature of Conscience," "Codes of Medical Ethics," "Our Tragic Moral Choices," "Telling the Truth to the Patient," "Euthanasia" give an idea of how Dean Sperry comes to grips with many of the problems in medicine. It is interesting that the closing chapter, "Reverence for Life," is devoted to the life and teachings of that individual in whom minister and physician have been so remarkably fused. Albert Schweitzer, M.D., whose presence at Aspen last summer lent so much distinction to the institute. The doctor who does not read this little book will miss something.

HORACE E. CAMPBELL, M.D.

A Text-Book of X-Ray Diagnosis: By British Authors, in four volumes. Second Edition. Edited by S. Cochrane Shanks, M.D., F.R.C.P., F.F.R., Director, X-Ray Diagnostic Department, University College Hospital, London; and Peter Kerley, M.D., F.R.C.P., F.F.R., D.M.R.E., Director, X-Ray Department, Westminister Hospital; Radiologist, Royal Chest Hospital, London. Volume III with 694 illustrations. W. B. Saunders Company, Philadelphia and London, 1950.

Volume IV is the first printed volume of the re-edited standard radiological text, compiled by a large group of British authorities. As in the past, the text is well-arranged, and the illustrations, although positive, are of good quality.

Volume IV deals exclusively with the normal and general pathology of bones and joints, in addition to two chapters devoted to roentgen study of associated soft tissues. The work is a compendium of known and recognized literature, and therein lies its real value.

An excellent basis for the pathological variations of bones and joints is provided by an elaborate discussion of the normal and so-called non-pathological variations from normal—establishing a background so essential for intelligent roentgenogram interpretation by both roentgenologist and orthopedist.

The section on Congenital Deformities of Bones and Joints is outstanding. The section concerning Uncommon Inflammatory Diseases of Bone, including yaws, actinomycosis, leprosy, echinococcus, etc., is very interesting. Chapter 32, on Orthopedic Operations, is valuable to the roentgenologist who wishes to understand the rationale of various orthopedic surgical procedures.

Several valuable points are stressed in this volume. A few include:

1. The value of soft tissue study in the early roentgen diagnosis of acute osteomyelitis—soft tissue changes being present on the second or third day after the onset of the disease—as compared with the earliest roentgen appearance of bone changes which take ten to fourteen days.

2. Emphasis on the normal variability of width of the lumbo-sacral interspace—"A thin disc at this site is within the limits of normal variations, and allowance must be made for this fact in the interpretation of the significance of a narrowed disc in presence of sciatic pain. A narrow dis

space is almost invariably present with secralization of the transverse process of lumbar 5."

3. Re-emphasis of a point which cannot be overemphasized—regarding the dangers of bone and joint fluoroscopy. "Fluoroscopy should play no part in the examination of bones or joints, even in the case of setting and manipulating fractures. The surgeon who adoptes the practice of setting fractures under fluoroscopic control is likely to have his surgical career cut short by an x-ray dermatitis of his hands."

This volume is an excellent reference book both for roentgenologists and orthpedists.

THOMAS J. KENNEDY, M.D.

Evaluation of Industrial Disability: Prepared by the Committee for Standardization of Joint Measurements in Industrial Injury Cases of the California Medical Association and Industrial Accident Commission, State of California. New York Oxford University Press, 1950. Price, $4.00.

This small book with the deceiving title is only an instruction manual for measuring and reporting joint movement. It was compiled by a sub-committee of the Council of the California Medical Association.

It falls short of adequacy in many particulars, some of which are:

1. The title is definitely misleading.

2. It tends to over-emphasize joint motion as being the only factor in "Evaluation of Industrial Disability."

3. Methods of Measurement which are set forth are sometimes inaccurate; for instance, measuring the change of position of a line on the sole of the foot does not give an accurate indication of the amount of rotation of the hip.

4. The method of reporting joint motion as a fraction, expressed sometimes in degrees and sometimes in a percentage of normal, is cumbersome and confusing.

5. No effort is made toward indicating the normal amount of motion in a given joint.

The book is laudable on these two counts:

1. It is the product of an early effort toward the standardization of measurement and disability.

2. It is well and profusely illustrated.

It deserves shelf space in a medical library only as a reference manual on "Measurement of Joint Motion."

FRED H. HARTSHORN, M.D.

Principles and Practice of Surgery: By Jacob K. Berman, A.B., M.D., F.A.C.S., Indianapolis, Indiana, Associate Professor of Surgery, Indiana University School of Medicine; Associate Professor of Oral Surgery, Indiana University School of Dentistry; Chief Consultant in Surgery, Billing's Veterans Administration Hospital, Fort Benjamin Harrison, Indiana; Director of Surgical Education and Surgical Research, Indianapolis General Hospital. With 429 illustrations; St. Louis. The C. V. Mosby Company, 1950. Price, $15.00.

This book is written with the idea of correlating the basic sciences—embryology, anatomy, physiology, biochemistry, pathology, and bacteriology, with the fundamental principles of surgery. Dr. Berman feels that upon such a foundation the structure of clinical surgery—etiology, symptoms and signs, diagnosis, prognosis, and treatment can be elected. The foundation and structure are thoroughly and interestingly presented throughout the book. It covers the "conquered ground" as well as the

unconquered experimental fields by giving the experiences of the author, his colleagues, and those from many books, journals, and personal communications.

Dr. Berman stated that the response to his "First Work," "Synopsis of Principles of Surgery," encouraged him to produce this new book. The "First Work" was published in 1940. It had the same twenty-three chapter headings that this "Second Work" has, but it was truly in the embryonic stage; although it, too, correlated the basic sciences with the fundamentals of surgery.

The book is divided into five parts: General Considerations of Surgical Principles; Local Response and General Body Reactions to Injury; General Reactions to Injury; Reactions of Tissues and Organs to Trauma of Unknown Origin; and Diseases and Injuries of Specific Organs and Systems.

The author gives a historical review, written in a most interesting style, in the opening chapter of the book. At the end of the chapter he points out that surgery is perhaps the "chief therapeutic resource of the physician;" and he lists seventeen good maxims and many aphorisms applicable to modern surgery. Included in Part I is a chapter on Pathology.

Part II covers: repair, bacterial invasion, ulcer and gangrene, miscellaneous and specific infections. Part III deals with: interchange of body fluid, acid-base balance, hemorrhage, and shock. The subjects are covered most admirably, impressively, and modernly in a manner that tends to clarify those problems which are common. Dr. Berman's explanations are understandable and practical. Part IV of the book includes: tumors and cysts. Part V covers: organs and systems. One may judge the book's value by reading a chapter included in this part entitled, "The Alimentary System," which includes almost 300 pages and over 300 references of which many are recent, including several by the author.

There are many pages of fine print which supposedly cover the unconquered experimental fields, but which appeal most strongly to those desirous of keeping abreast of the times in medicine and surgery. One might mention that there are too many typographical errors, but these detract very little from such an excellent book of surgery. Another book, Principles and Practice of Surgery by Babcock, last published in 1944, bears the same title, and this is mentioned, so that the two will not be confused.

The book is well and clearly illustrated with charts, line drawings, and photographs each of which carries an outstanding terse explanatory legend. Treatment is not neglected in the least. Dr. Berman has interwoven this important aspect of the book, so that the text and the legends give the maximum results with the least effort on the part of the reader. The principles of treatment are modern, tried, and true, and certainly adequate for a book bearing this title. It truly reflects the author's ability as an outstanding, deeply interested teacher with a seemingly unlimited knowledge of the Art as well as the science of surgery, who is also the author of numerous scientific articles which have been published in many of our best surgical journals.

WILLIAM G. BAKER, M.D.

The Physician Examines the Bible: By C. Raimer Smith, B.S., M.D., D.N.B. Philosophical Library, New York. Price, $4.25.

This is the latest in the long list of attempts

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to "harmonize" religion and science. Like all the rest of such attempts in the thousand year-long list it does more harm than good to both philosophies. Through weak, tricky, far-fetched, or fanciful interpretation of words, phrases, and sentences the author tries to prove that there is no conflict between the Bible and the present day scientific knowledge. Frequently, by the same means, the ancient authors of the book are credited with knowledge that, if theirs, has been only rediscovered.

Most if not all the quotations are taken from the King James version. Historically this wonderful translation is mediaeval. The translations were made by scholars that were handicapped by the lack of present day knowledge of comparative philology. Hence the very many errors that are known to exist work. If errors should be quoted in an attempt to establish facts those errors are compounded.

The author has organized his work well. The order is logical. As an example of planning a detailed essay it is excellent. For the casual reader there can be considerable interest. It will not convert the atheist or strengthen the faith of the believer if read critically. It would be better to avoid such efforts and, like Ambrose Pare, believe without question and accept without argument.

CHESMORE EASTLAKE, M.D.

Physical Examination in Health and Disease: By Rudolph H. Kampmeier, A.B., M.D., Associate Professor of Medicine, Vanderbilt University School of Medicine; Visiting Physician to Vanderbilt University Hospital; Chief of the Medical Outpatient Service, Vanderbilt University Hospital, Nashville, Tennessee. With 550 illustrations, one in color. Philadelphia: F. A. Davis Company, Publishers, 1950. Price, $8.00.

This is an excellent text for the medical student in physical diagnosis. It is clear, concise and straightforward in its approach to the examination of the patient, and is quite complete in its coverage of the time-honored "signs" and eponymic phrases without being didactic. The 73-page index makes this completeness doubly valuable to the student by its ready reference. The many cross references in the text itself and the frequent use of synonyms throughout the book serve the dual purpose of fixing the material in the reader's mind and broadening the student's medical vocabulary without being repetitious.

The relatively new departures in this book from the traditional textbook presentation are both valuable and refreshing. The emphasis on history taking, the concept of "the body in action" to acquaint the student early with the psychosomatic aspects of physical diagnosis, and "the general survey" to orient the student in approaching the patient as a whole rather than as a mathematical sum of unrelated physical findings, serve as an excellent introduction to the main text. The digression into the neurologic examination at the end of the second chapter, though not written by the author, is unfortunate and may tend to confuse and discourage the student at the outset. Deletion of these four or five pages, or transference of this material to the last chapter which gives perhaps too little introduction to the neurologic examination, would be an improvement. The segregation of normal and abnormal findings into separate chapters not only clarifies the

distinction made, but serves as a review of the normal findings for each region of the body. The correlation of physical findings with the physiologic processes involved, pathological specimens, x-rays and electrocardiograms is unusually valuable in helping the student make the transition from the academic to the clinical period in his training. The abundant (550) illustrations add immeasurably in this correlation, but much of the value of these excellent illustrations is lost on the reader because of the unfortunate manner of reference to them, in that they are numbered consecutively by chapters and referred to in the text as (Fig. 10, Chapter 3) which, without chapter numbers on each page, makes reference tedious and difficult. Serial numbering throughout the entire book or reference by page as is done in the index would double their value.

The photography is excellent and could only be improved upon by the use of economically prohibitive color photographs. The author has wisely taken advantage of his opportunity to use illustrative clinical cases in Negroes, with resultant improvement in photography. For some reason, possibly tradition, there seems to be undue emphasis on syphilis.

The book is well-written and unusually free of typographical errors for a first edition. The only grave error is on p. 135 where a ratio is printed as 2:33 which should read 2:3. The only other error noted is on p. 435, a trivial deletion of an "e," in line 15.

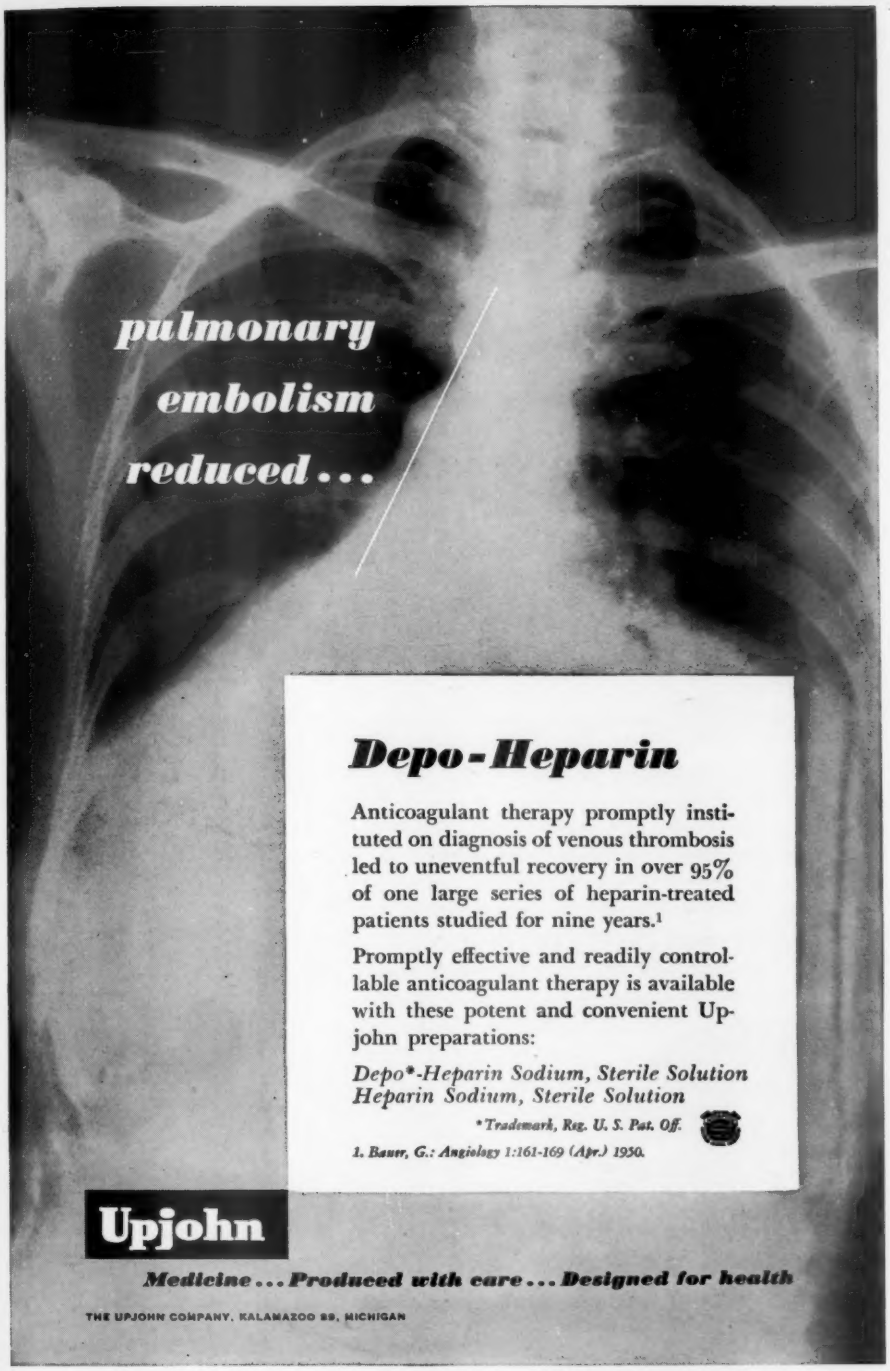
D. H. MITCHEL, M.D.

Medical Diagnosis, Applied Physical Diagnosis: Edited by Roscoe L. Pullen, M.D., F.A.C.P., Professor of Graduate Medicine, Director of the Division of Graduate Medicine, and Vice Dean of the School of Medicine, Tulane University of Louisiana; Senior Visiting Physician, Charity Hospital of Louisiana at New Orleans; Consultant in Medicine, Veterans Administration Hospital, New Orleans, Louisiana; Consultant to the Surgeon General, Department of the Army, Washington, D. C. Second Edition, with 601 figures, 48 in color. W. B. Saunders Company, Philadelphia and London, 1950.

This is a serviceable book, written for general practitioners and students. Not all the changes in the second edition are profitable, but the result is a net gain. There are two good new chapters, The Aged by Boas, and The Blood by Finch. Omitted without loss are chapters on military problems and occupational injuries, but those on prognosis and the differential diagnosis of coma might well have remained. The section on gastroenterology has been enlarged threefold to include x-ray.

An unfortunate change has been made in the section on Psychiatry. Merrill Moore's well-written and enlightening Psychiatric Approach is gone, and is replaced by an anatomical catalog of the physical disorders seen in patients with mental disturbances. Perhaps this was done because the theory and art of psychiatry was thought too specialized for the general practitioner, and because good texts are available. If so, most of the over-large section on electrocardiography could be dropped for the same reasons. Former chapters on psychometric technic and electroencephalography were admittedly too specialized, but Merrill Moore's papers offered something more than just diagnosis, and had more value for the general practitioner than does an explanation of Einthoven's triangle.

However, this is a debatable fault to find with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1. Bauer, G.: Angiology 1:161-169 (Apr.) 1950.
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such an encyclopedic tour de force written by competent specialists. With minor exceptions it is well-proportioned, and an improvement on the first edition.

THOMAS H COLEMAN, M.D.

A Textbook of Gynecology: By Arthur Hale Curtis, M.D., Emeritus Professor and Chairman of the Department of Obstetrics and Gynecology, Northwestern University Medical School; formerly Chief of Gynecology Service, Passavant Memorial Hospital, Chicago; and John William Huffman, M.D., Associate Professor of Obstetrics and Gynecology, Northwestern University Medical School; Attending Gynecologist, Passavant Memorial Hospital, Chicago. Sixth Edition with 466 illustrations, chiefly by Tom Jones, including 37 in color. W. B. Saunders Company, Philadelphia and London, 1950.

The preparation of the sixth edition has been jointly shared by Dr. A. H. Curtis and Dr. J. W. Huffman.

The new volume, totaling 765 pages with 466 illustrations, is the result of detailed review and revision of all chapters, but with no basic change in the outline of the book.

This text has been maintained as an up to date compendium on gynecology and stands unequivocally as a leading authoritative work.

MacDONALD WOOD, M.D.

Plastic and Reconstructive Surgery (A Manual on Management): By Ferris Smith, M.D., F.A.C.S., Consultant in Plastic Surgery, Blodgett Memorial Hospital, Grand Rapids, Mechigan. W. B. Saunders Company, Philadelphia and London, 1950. Price, $15.00.

This book, as the author indicates in the title, is a directive manual and is to be used as a guide for the surgeon with basic training and competent judgment. In many ways it is an enlargement and revision of the excellent section on "Reconstructive Surgery" which appeared in The Manual of Standard Practice of Plastic and Maxillo-facial Surgery, which Dr. Smith edited during World War II for the National Research Council. This excellent book deals with basic principles and their application to plastic and reconstructive surgery. Each type case is discussed in detail and usually on the same page excellent photographs of the various stages are found. In this way the surgeon reading this book can easily learn which plan of attack Dr. Smith feels will and has given the best results. Dr. Smith emphasizes that the book is to be used as a guide, and solution of the individual problem requires planning and initiative. The chapter on meloplasty is outstanding. Dr. Smith's ability to use adjacent skin as rotated or specially designed sliding flaps, well illustrated in his book, has brought him national renown. This book has an excellent bibliography and, although written primarily for the specialist in this field, has wide practical application to many of the problems seen by the surgeon.

F. A. GARCIA, M.D.

Practical Gynecology: By Walter J. Reich, M.D., F.A.C.S., F.I.C.S., Attending Gynecologist, Cook County Hospital; Professor of Gynecology, Cook County Graduate School of Medicine; Attending Gynecologist, Fantus Clinics of the Cook County Hospital; Assistant Professor of Gynecology, Chicago Medical School; Attending Gynecologist and Obstetrician, Grant Hospital; Attending Gynecologist, Fox River Tuberculosis Sanatorium; Consulting Gynecologist, Hazelcrest General Hospital; and Mitchell J. Nechtow, M.D., Associate Attending Gynecologist, Cook County Hospital and the Fantus Gynecologic Clinic: Assistant Clinical Professor of Gynecology, Cook County Graduate School; Associate in Gynecology and Obstetrics, Chicago

Medical School; Attending Gynecologist and Obstetrician, Norwegian-American Hospital. With 187 illustrations, including 55 subjects in color. Philadelphia-London-Montreal, J. B. Lippincott Company. Price, $10.00.

This is a new volume with an unusual perspective, resulting from the increasing use of office treatment in gynecologic disorders. This book gives a comprehensive presentation of effective technics and improvisations useful in office and outpatient gynecology, with emphasis on etiology, symptoms diagnosis and treatment. Among the topics covered are examination routines, laboratory tests, biopsy, cytology, and the diagnosis and treatment of commonly seen disorders.

In line with the increased attention now being focused on the mind in all branches of medicine, the opening chapter of this book concerns psychosomatics in gynecology. In the preface, the author say they fervently hope the Papanicolaou smear test will become as routine as the Wasserman test but that this Utopia is a long way off. In the chapter dealing with dysmexnorrhea, the authors advocate many proprietary drugs, some simple, but others as strong as 100 mgm. of demerol hydrochloride. Emphasis is placed by the authors and publishers on the fact that this book deals with office gynecology, but diagnostic curettage for carcinoma should be a hospital procedure, because the scraping must be a thorough one. Likewise perineotomy and repair for vaginismus must be done in a hospital, as judged by the authors' illustrations. Contrary to the views of the authors, semen should not be deposited in the uterine cavity in cases of artificial insemination even when the husband's semen is used because of the danger of infection. The illustration shows the deposition of semen in the cervical canal, and, while this is proper in cases in which the husband's semen is used, it will suffice to deposit a donor's semen against the external os of the cervix. In spite of the few minor criticisms, the book is quite helpful. It is well written and practical because it is based on the author's extensive experience. Well-illustrated, this book is designed to serve as a handy desk reference on numerous gynecologic disorders. The physician should find it most useful .

ALVIN J. FROSH, M.D.

Techniques in British Surgery: Edited by Rodney Maingot, F.R.C.S., Surgeon to the Royal Free Hospital, London, and to the Southend General Hospital. First Edition. Cloth. 733 pages, with 473 illustrations. The W. B. Saunders Company, Philadelphia, London, 1950. Price, $15.

This book is a collection of specially selected articles on surgical subjects written by twenty-nine British surgeons. It is well illustrated and the articles are clearly and concisely written.

The chapters entitled "Spinal Tumours," "Surgery of the Thyroid Gland," "Congenital Defects of the Heart," "Thymectory for Myasthenia Gravis," "The Surgical Aspects of Cardiospasm," Radical Retropubic Surgery of the Prostate" and "Arthrodesis of the Hig, Knee and Ankle" are particularly noteworthy.

The book is of such value that it should be inspected, at least, by every surgeon regardless of specialty. What the British surgeon is doing is of interest and instructive to all.

H. CALVIN FISHER, M.D.

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Index to Advertisers

Rocky Mountain Medical Journal,
Denver, Colorado.

Gentlemen:

I am writing to extend a cordial invitation to the physicians and surgeons in the states of Colorado, New Mexico, Utah and Wyoming to attend a three-day Sectional Meeting of the American College of Surgeons in Denver, Colorado, on April 5, 6 and 7. On the first day of the meeting, April 5, the hospitals in Denver will put on an excellent day of clinics.

The program at the Cosmopolitan Hotel, April 6 and 7, will consist of several new surgical motion pictures, papers, panel discussions and symposia on such subjects as: Surgery in the Peripheral Vascular Disorders, Chest Injuries, Pitfalls in Gallbladder Surgery, Present Status of Chemotherapy, Neck Surgery, Acute and Chronic Osteomyelitis, Cancer of the Head and Neck, Cancer of the Cervix, Cancer of the Gallbladder, Varicose Veins—Stripping versus Ligation, Urinary Fistulae Following General Surgical Operations, Lacerations of the Face, Peptic Ulcer, Emergencies Arising During Operation, and Surgical Conditions of the Colon, Anus and Rectum.

A five-dollar registration fee will be required, except from Fellows and members of the Junior and Senior Candidate Groups of the College, and interns and residents, but we are confident that the physician or surgeon in practice will find the program worth many times the registration fee.

As Chairman of the Committee on Arrangements, I can assure you that the Fellows of the College in Denver will give full cooperation in assisting physicians and surgeons from Colorado, New Mexico, Utah and Wyoming to take full advantage of this excellent meeting if they will come to Denver on April 5, 6 and 7.

Sincerely yours,

KENNETH C. SAWYER, M.D., F.A.C.S.,
Chairman, Committee on Arrangements.

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